REPORT

OF THE

Medical Officer of Health

CITY OF GLASGOW

1948

CORPORATION OF GLASGOW

61575

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE
LIBRARY
20 MAY 1965

CORPORATION OF GLASGOW—PUBLIC HEALTH COMMITTEE

The Right Honourable the Lord Provost,
Sir HECTOR MCNEILL, LL.D., F.E.I.S.

Convener—Bailie WILLIAM REID, J.P.

Sub-convener—Bailie ALICE CULLEN, M.P., J.P.

Conveners of Sub-committees.

Hospitals, etc.	Bailie WILLIAM REID, J.P.
Clinical Services ...	Bailie ALICE CULLEN, M.P., J.P.
Finance and Works ...	Bailie EDWARD HUNTER, J.P.
Special Services	Bailie THOMAS A. O'HARE, D.L.
Mental Services	Bailie ALEXANDER H. PORTER, J.P.

Bailies.

JOHN MCK. INGLIS
WILLIAM MONTEITH
JAMES JOHNSTON
MARY A. MCALISTER
JOHN MCASLAN, O.B.E.
RALPH S. STARK BROWN, M.C., J.P.

Depute River Bailie JOHN H. P. TAYLOR

Councillors.

W. GORDON BENNETT
LAWRENCE S. BLANCHE, J.P.
CHRISTINA S. BROUGH
WILLIAM CARMICHAEL
ROBERT A. CUTHBERTSON
GLADYS M. DEWAR
JOHN DUFFY, J.P.
HELEN E. GAULT
DAVID W. GIBSON
JOHN C. GRAHAM
SAMUEL A. GRATTON
WILLIAM G. GREIG
ALEXANDER HART
PETER L. MELDRUM
JAMES MCINNES, M.B.E., J.P.
LAURA MACLEAN, J.P.
GORDON REID
WILLIAM RISK
VIOLET M. C. ROBERTON, C.B.E., LL.D., J.P.
GEORGE SMITH, J.P.
ROBERT C. SMITH
JOHN STEWART, J.P.
JOHN STORRIE, M.B.E., J.P.
ADAM I. TEMPLETON
ALLAN C. YOUNG

JOHN YOUNG, M.B.E., J.P.

PUBLIC HEALTH STAFF

Medical Officer of Health.

Stuart Laidlaw, B.Sc., M.D., Ch.B., D.P.H., B.L., D.P.A.

Senior Deputy Medical Officer of Health.

William A. Horne, M.D., Ch.B., D.P.H.

Senior Medical Officer, Infectious Diseases, etc.

William C. Gunn, M.D., Ch.B., D.P.H.

Senior Medical Officer, General.

Archibald R. Miller, M.D., Ch.B., D.P.H.

Senior Medical Officer, Maternity and Child Welfare.

Nora I. Wattie, M.B., Ch.B., D.P.H.

Senior Medical Officer, Education Health Service.

James Ewan, M.B., Ch.B., D.P.H.

Bacteriologist.

Hartley S. Carter, M.D., Ch.B., D.P.H.

Divisional Medical Officers.

Central Division ...	Ian B. L. Weir, B.Sc., M.B., Ch.B., D.P.H., D.P.A.
Northern Division ...	James S. McMillan, M.B., Ch.B., D.P.H.
Eastern Division ...	James S. Gemmell, M.B., Ch.B., D.P.H., D.P.A.
South Eastern Division ...	Elias Bloch, M.B., Ch.B., D.P.H.
South Western Division ...	Hugh D. Wallace, M.B., Ch.B., D.P.H., D.P.A.

Assistant Divisional Medical Officers.

J. H. BELL, M.B., Ch.B., D.P.H., D.I.H.
DUNCAN MACLEAN, M.B., Ch.B., D.P.H., D.I.H.

General Duty Officer.

A. H. McLEAN, M.B., Ch.B.

Mental Health Services—Medical Officers.

JOHN WILSON, M.B., Ch.B.
JAMES P. STEWART, M.B., Ch.B.
D. HARRIS JONES, M.A., M.B., Ch.B.
PATRICIA O'KANE, L.R.C.P.I. and L.M., L.R.C.S.I. and L.M.

Divisional Sanitary Inspectors.

GEORGE LAUDER
JOHN D. ARTON
ALEXANDER EASTON
WILLIAM RAE
WILLIAM EASTON

Senior Food Inspector	ANDREW M. STEWART
Senior Smoke Inspector	THOMAS M. ASHFORD
Superintendent of Health Visitors ...	Miss ELIZABETH GUTHRIE
Supervisor of Midwives	Miss AGNES B. HUNT
Supervisor of Home Helps	Mrs. ABLIN

Port Health Authority.

Senior Inspector	CHARLES RANDALL

Secretary—WILLIAM McKEAN

Digitized by the Internet Archive
in 2016 with funding from
Wellcome Library

https://archive.org/details/b28652356

PREFACE

It is customary to preface the Annual Report by a brief reference to some of its more important contents. These are usually grouped under two main headings (*a*) population and vital statistics, and (*b*) the health services administered by the Department. I have included this year an additional section (*c*) in which I have reported on the effects of recent health legislation on the work of the Public Health Department.

(*a*) POPULATION AND VITAL STATISTICS.

Population.—The population of the City has been estimated at 1,110,000 persons, but accurate figures will not be available until the next census has been taken, probably in 1951. The ward boundaries were readjusted during the year, and a map indicating the changes has been inserted as a frontispiece to this Report.

Housing.—The population of the City is housed in 293,814 houses. It is interesting to note that since the commencement of Local Government operations the Corporation has provided 65,960 of these houses, so that to-day approximately 22·5 per cent. of dwellings in the city are administered by the City Improvements Department. The number of tuberculous families rehoused during the year was 326, the highest number attained in any year since the priority scheme was initiated in 1929. There is no doubt that Glasgow requires urgent building priority, for, on the basis of depreciation alone, at least 1,000 houses would be required annually for replacement of worn out buildings, even if the accumulated arrears due to the years of war were disregarded.

General Death-rate.—The general health of the city, as measured by the vital statistics, showed further improvement. There were 14,638 deaths registered during the year. When corrected for inward and outward transfers, the final figure represents a death-rate of 12·27 per thousand of the population compared with 13·88 in 1947. This is the lowest rate ever recorded in the City.

Causes of Lower Mortality.—The reduction in mortality has mainly been due to a lower death-rate from infectious diseases, the rate, at 300 per million, being only half that returned for the previous year. The mortality rates of both diphtheria and whooping cough fell to new low levels, and no deaths occurred from the enteric group of diseases. Deaths from diarrhoeal diseases, of children under two years of age, were lower in number than ever. On the other hand, there was a heavy mortality from pulmonary tuberculosis, the rate per million being

1,142 compared with 1,066 for the previous year. The success of preventive efforts in reducing the death-rate is apparent, however, when non-pulmonary tuberculosis is considered, for the rate recorded in 1948 was 135 per million whereas formerly it has never been lower than 200. This reduction is partly due to the clean milk campaign, and reflects great credit on the supervision exercised by the Chief Food Inspector and on the management of the milk distributing trade.

Infant Mortality and Maternal Mortality.—The infant mortality rate per 1,000 live births was 56. This is the lowest rate for the City and is only half that recorded for 1941. The weather conditions of 1948 were favourable, there was no outbreak of gastro-enteritis, and there were fewer deaths from diseases of the respiratory system. The maternal mortality per 1,000 births fell to the record low figure of 1·56, due in part to the provision of additional beds in hospital for first births and to improved ante-natal supervision.

(*b*) THE HEALTH SERVICES ADMINISTERED BY THE DEPARTMENT.

Bacteriological Laboratory.—The work of the City Laboratory deserves recognition, for the amount done constitutes a record in its history, and clearly demonstrates the increased need for bacteriological investigations in the modern control of disease, in the securing of a clean food supply, and in the provision of the epidemiological information required by the administration of the health services of the City. The number of examinations made during the year exceeds 95,000, and in addition much research work has been accomplished.

Occupational Health.—This is a new field which will open up and become increasingly important. During the year several pilot investigations have been initiated by this Department which will be dealt with in subsequent reports.

Food.—Pasteurised and heat treated milk sold in the City, which comprises 95 per cent. of the supply, showed an increase of 8,000 gallons over last year's figures.

Diabetes Scheme.—The new arrangement by which diabetic patients obtain supplies of insulin through their own chemists instead of by application to this Department has resulted in cessation of the follow-up system by health visitors. This is unfortunate, as there was considerable advantage in a system of control by which sufferers were supervised and advised about periodic re-assessment. The disadvantage arising from the change could be overcome if power could be obtained to make the disease notifiable and to deal with it as a part of the scheme of care and after-care (Section 27, National Health Service (Scotland) Act).

Venereal Diseases.—Although the appointment of specialists and lay staff to the venereal diseases clinics has become the responsibility of the Western Regional Hospital Board, the administration of the scheme has been left with the Public Health Department. This has been made possible by the Medical Officer of Health acting as Administrative Co-ordinating Officer.

Lunacy and Mental Deficiency.—Section 51 of the National Health Service (Scotland) Act left the outdoor administration of lunacy and mental deficiency as a function of the Local Health Authority. Because of the dissolution of the Outdoor Medical Service, it has been necessary to appoint four medical officers with experience in this branch of medicine to carry out the duties which fall to be undertaken. These doctors work in conjunction with the authorised officer and also attend to the statutory and other necessary visits to boarded-out mental defectives.

Domiciliary Midwifery Service.—This service has expanded considerably during the year. The staff of full-time midwives has been augmented by a number of midwives who were, prior to 5th July last, in private practice. The Glasgow District Nursing Association also continues to carry out domiciliary midwifery. Full details of the arrangements, which are still in process of development, are included in the Report.

During the year under review there has been an extension of the training scheme for pupil midwives to include also pupils from the Royal Maternity Hospital. Owing to the altered circumstances brought about by the National Health Service (Scotland) Act, it became necessary to have a co-ordinated training scheme for the City.

Home Nursing Service.—For many years the Glasgow District Nursing Association has provided an excellent service of Queen's nurses throughout the City. The Association is affiliated to the Queen's Institute of District Nursing and is one of the training institutions in Scotland for Queen's nurses. The new responsibility for home nursing under the Act and the increasing domiciliary nursing care required in various directions mean an expansion of the service by the Local Health Authority. To provide for this expansion and at the same time to safeguard the high standard of training required for Queen's nurses, the Corporation decided to form a Joint Committee with the Association. The scheme is working very satisfactorily.

Home Help Service.—The Home Help Scheme, previously permissive, has been made obligatory by the National Health Service (Scotland) Act, with the result that a further expansion of this service has taken place.

Port Health.—There is no change in the jurisdiction governing these services, and the section has continued to work satisfactorily. No case of plague, cholera, yellow fever, smallpox or typhus was reported during the year, although from July 1, 1947, to June 30, 1948, 16,051 vessels called at or sailed from Glasgow. During the year the Medical Officer of Health, in his capacity as Port Medical Officer, was appointed a member of a Committee set up at the request of the Ministry of Labour to prepare a report on dock amenities. Investigations were also carried out into the presence of mineral oil in imported fats and a report submitted to the Ministry of Food.

Air Purification.—The improvement in boiler plant noted last year has been continued. Although the delivery of equipment is still slow, some very extensive plant alterations are in progress and will be listed in a future report. Viewed generally, the position regarding atmospheric pollution is improving steadily. Classes were again held in boiler-house practice, smoke abatement and fuel economy.

General Sanitation.—The work of the sanitary section has been more fully reported upon this year. No outstanding development has taken place, but the work of rat extermination has been pressed forward with vigour and has led to satisfactory results.

(*c*) EFFECTS OF RECENT HEALTH LEGISLATION ON THE WORK OF THE PUBLIC HEALTH DEPARTMENT.

During the course of the year the National Health Service (Scotland) Act came into force, so this is the first Annual Report of the Medical Officer of Health since 1929 which has not included a section on the work of municipal hospitals. In its place is information regarding the many new duties added to the Health Department, including the building up of a home nursing service, the expansion of domiciliary midwifery services to cover the whole City, the formation of a mental health section, a large expansion of the home help provision, wider duties for the health visitor in the field of domiciliary care, and new duties in the province of care and after-care. Much of this opens up new and unexplored territory and entails additional responsibility and administration.

The eighteen municipal hospitals together with the voluntary hospitals have been transferred to State control, and are now administered, on behalf of the Secretary of State, by the Scottish Western Regional Hospital Board. But the link with these hospitals has not been entirely broken, as various senior medical officers on the staff of the Health Department serve on Hospital Boards of Management. The Regional Hospital Board also felt it essential that the Medical

Officer of Health should continue to co-ordinate admissions to infectious disease hospitals by direct consultation with the medical superintendents of the various hospitals, and that the Senior Maternity and Child Welfare Officer should have similar powers to arrange the admission of cases to the seven maternity units in Glasgow. These two officers were each given a special title and rank with the Regional Hospital Board, of Administrative Co-ordinating Officer. These offices do not command any remuneration from the Board, but they confer the necessary administrative authority under the direction of the Board's Senior Administrative Medical Officer. These arrangements have been of the greatest assistance in co-ordinating the infectious disease and maternity services within the City and in avoiding the inevitable weakness of divided responsibility which would otherwise have arisen if the National Health Service (Scotland) Act had been literally applied.

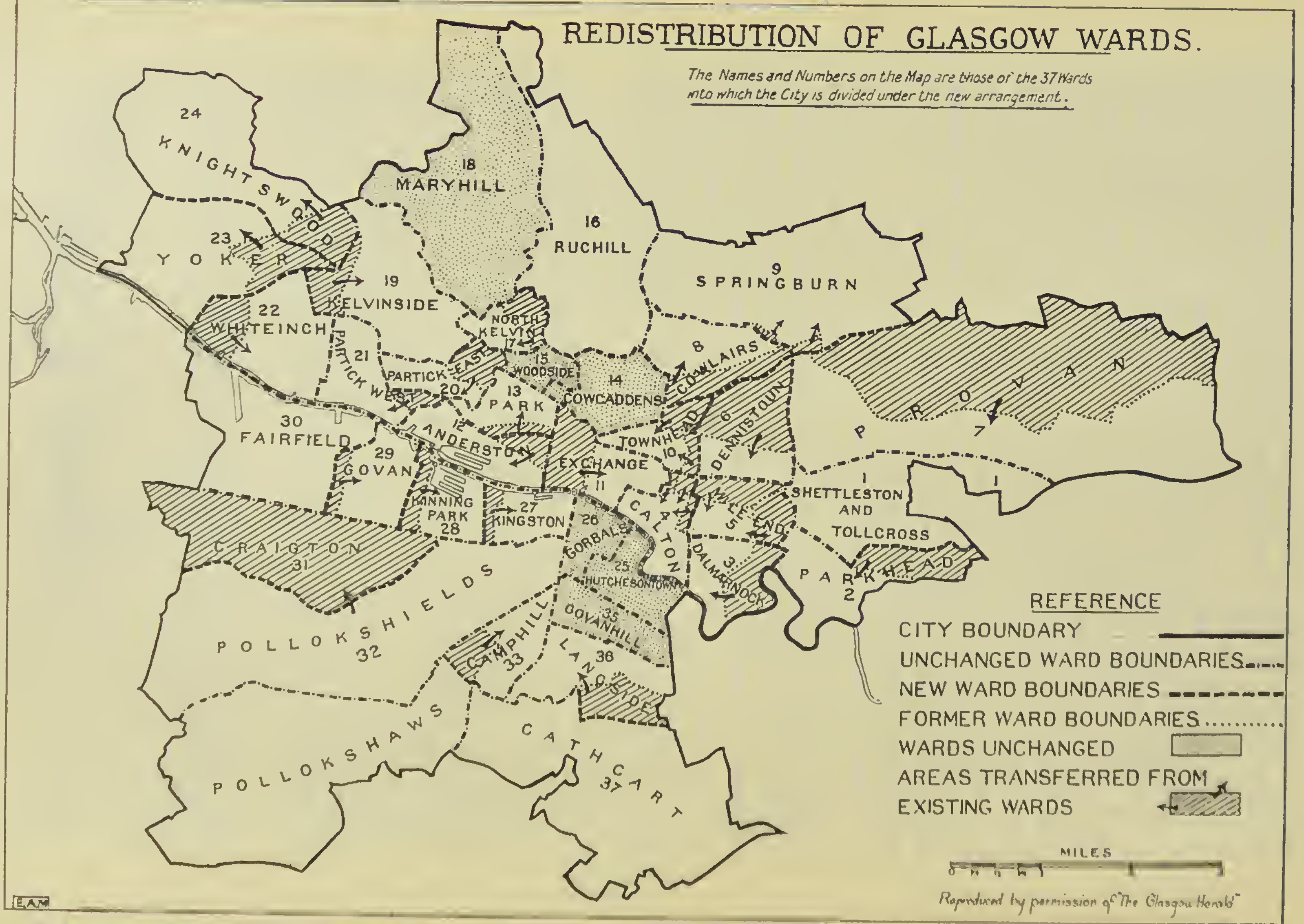
A full account of the problem of tuberculosis, as it affects Glasgow, is included in the Report. The changes brought about by recent legislation have, I feel, displaced this widespread disease from its proper setting. Tuberculosis, by its long duration and the deep-seated human difficulties it causes, becomes essentially a social problem which should never have been separated from the sphere of preventive medicine and should have continued to be administered by the Local Health Authority. The recent legislation which passed to a hospital authority the control of clinics, mass radiography and sanatoria, is wrong in concept and is detrimental to the service.

For over 30 years Mr. William McKean, the Secretary to the Department, has played a leading part in the preparation of the Annual Report, and during this period he has carried out much original enquiry into public health statistics. He has seen great changes in the field of public health, and his long experience has made him an invaluable source of information. This Report is probably the last with which he will be associated, for he is due to retire under the Superannuation Scheme early next year. I therefore take this opportunity of recording my appreciation of the services which he has always so unstintingly rendered during the past 50 years.

In conclusion, I find it a pleasure to acknowledge the courtesy and help extended to me at all times during the year by the Convener and members of the Health Committee.

Stuart Laidlaw

REDISTRIBUTION OF GLASGOW WARDS.



The Names and Numbers on the Map are those of the 37 Wards into which the City is divided under the new arrangement.

Reproduced by permission of "The Glasgow Herald"

CONTENTS

PREFACE

SECTION PART I. PAGE

I. POPULATION—

Effect of changes in ward boundaries 18
Ward Populations 23
Inhabited Houses, etc. 24
Temperature and Rainfall (Meteorological Observations) 26
Health Propaganda 27
Blind Persons Acts 28
Mental Health Services 32
Legislation 36

II. VITAL STATISTICS—

Summary 39
Births, Marriages, Deaths 39
Causes of Death 41
Deaths from Cancer 47

III. MATERNITY AND CHILD WELFARE—

Maternity and Child Welfare Services 50
Infant Mortality 52
Notification of Still Births 56
Child Welfare Scheme 56
Supply of Milk to Mothers and Children 59
Ante-Natal Consultations 59
Maternal Mortality 60
Dental Treatment for Expectant Mothers 62

SECTION PAGE

III. MATERNITY AND CHILD WELFARE—*Continued*—
Artificial Light Treatment 62
Infant Visitation 63
The Health Visitor in the National Health Service ... 64
Home Nursing Service 68
Nurses' Agencies 68
Day Nurseries 68
Nurseries and Child Minders 70
Home Help Scheme 70
Midwives (Scotland) Acts 72
Municipal Midwives 73
Nursing Homes Acts 74
Ophthalmia Neonatorum and Results of Treatment ... 74
Puerperal Fever and Puerperal Pyrexia 75

IV. INFECTIOUS AND OTHER DISEASES—
Smallpox and Vaccination 76
Enterica Infections and Dysentery 78
Scarlet Fever 80
Diphtheria and Immunisation 81
Erysipelas 85
Diseases of the Central Nervous System 85
Malaria 86
Measles 86
Whooping Cough 88
Chickenpox 88
Diarrhoea and Enteritis 89
Infective Jaundice 90
Glandular Fever 91
Scabies 92
Trachoma and Rabies 93

Respiratory Diseases—
Pneumonia and Influenza 93

Tuberculosis—
Pulmonary Tuberculosis, Contact Infection ... 95
Modern Methods of Prevention and Treatment ... 101

SECTION PAGE

IV. INFECTIOUS AND OTHER DISEASES—*Continued*—

Venereal Disease—

Scheme 114
Work of the Centres 116
Congenital Syphilis, etc. 117
Venereal Disease in Seamen, etc. 117
Defaulters 120
Diabetes—Supply of Insulin 121

V. WORK OF PORT HEALTH AUTHORITY—

Inspection of Ships 124
Smallpox 129
Aliens Act 129
Destruction of Rats and Mice 130
Fumigation of Ships 130
Hygiene in Crews' Spaces 131
Anthrax 133
Food Inspection and Imported Food Regulations ... 134
Sanitation at the Docks 138

VI. HOUSING—

Provision of Houses 141
Decrowding Operations 144
Slum Clearance and Rehousing 144
Conditions in Slum Clearance Rehousing Schemes ... 145
Bug Infestation 147
Bug Extermination by D.D.T. 148

VII. BACTERIOLOGICAL LABORATORY—

Infectious Disease. Epidemiological Investigations ... 152
Food Poisoning, etc. 154
Antenatal—Rh Tests 155
Milk Supply 156
Water and Other Examinations 157
Original Investigations 158

SECTION PAGE

VIII. FOOD—

Food Poisoning 161
Operations under Food and Drugs (Adulteration) Act, 1928 164
Milk (Special Designation) Orders 167
Tubercle Bacilli, etc., in Milk 170
Supply of Milk to School Children 172
Inspection of Food Premises, Dairies, Byres, etc. ... 173
Ice-Cream (Scotland) Regulations 175
Prosecutions 178
Operations under the various Acts, 1942 to 1948 ... 178

IX. AIR PURIFICATION—

Summary of Work of Department 183
Soot Collecting Gauges 187
Classes on Boilerhouse Practice 188

X. GENERAL SANITARY ADMINISTRATION—

Reports by Divisional Sanitary Inspectors—

Central Division 191
Northern Division 197
Eastern Division 209
South Eastern Division 216
South Western Division 220

Offensive Trades 222
Disinfection 223

APPENDIX TABLES

TABLE PAGE
I. Estimated Population in Municipal Wards, Acreage, etc. 224
II. Inhabited and Unoccupied Houses in Municipal Wards 225
III. Linings Granted by Dean of Guild Court 226
IV. Abstract of Meteorological Observations at Glasgow ... 226
V. Births and Birth-rates and Illegitimate Births in Wards 227
VI. Deaths and Death-rates in Wards 228
VII. Outward and Inward Transfer Deaths 229
VIII. Deaths and Death-rates from different Diseases ... 230
IXA. Sex and Age Distribution of Deaths (Males) 232
IXB. Do. do. (Females) ... 233
X. Deaths occurring in Institutions, Nursing Homes, etc. 231
XI. Deaths under 1 year and Death-rate per 1,000 Births 234
XII. Infant Deaths at Given Ages and from certain causes 235
XIII. Abstract of Notifications under Notification of Births Act, 1907, and results of Visits 236
XIV. Births Notified—Medically and not Medically attended 236
XV. Cases of Infectious Disease Registered and Number Treated in Hospital 237
XVI. Cases of Infectious Disease Registered in Months ... 238
XVII. Operations of Sanitary Sections 239
XVIII. Population; Births and Deaths; Birth-rates and Death-rates per 1,000; also Deaths under 1 year, and Death-rates per 1,000 Births since 1890 ... 248

DIAGRAMS

(1) Altered Municipal Wards of Glasgow 12
(2) Deaths from Circulatory Disease 44
(3) Diabetes Death-rates, Sex and Age 46
(4) Infant Mortality: Causes 52
(5) Mortality among Toddlers 55
(6) Maternal Mortality 61
(7) Diptheria Cases and Deaths 1940 to 1948 83
(8) Tuberculosis Death-rates. Glasgow 96

REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1948

PART I

SECTION I

POPULATION, Etc.

The estimated total population of the city as at the middle of 1948 has been taken at 1,110,000 which is 10,000 more than the estimate for the previous year. The populations of these groups (the electors, *i.e.* those over 21 years, children under 5 and school children 5 to 15 years of age) for which fairly accurate figures were obtainable were given in the 1947 Report. These substantiate an estimated population of the city higher than that adopted. Until the next census is taken therefore, probably in 1951, it has been decided to increase gradually the estimates of population in the hope that when the census results are known, there will be an approximate correspondence between the two figures, thus avoiding any great disparity in the rates of the vital statistics between now and the date when the census figures become available.

With the exception of the addition of three small areas to the peripheral wards where Corporation housing schemes encroached on county areas which were consequently annexed under the Housing Acts, the boundaries of the municipal wards have not been altered since 1926. The alterations in 1926 affected mainly wards on the boundary of the city when large areas of unbuilt ground were annexed in order to provide sites for housing schemes. The peripheral wards had large acreages, parts of which have been utilised for the siting of housing schemes during the past twenty years. These were situated mostly in the Shettleston and Tollcross, Provan, Ruchill and Pollokshields districts which consequently acquired large populations in the region of 50,000. On the other hand some of the wards in the centre of the city had become depleted to such an extent that the populations had been reduced to about one-fourth or one-fifth of the numbers stated. There has also been the continuance of the gradual movement of families to suburban areas.

With a view to rectifying this disparity of the population (each ward having three representatives on the town council) it became necessary to adjust the boundaries of the wards in order to put municipal ward populations on a more equitable basis. Authority to undertake this redistribution was therefore obtained in the Local Government (Scotland) Glasgow Wards and Councillors Order, 1948.

A map indicating the changes which have been made in the ward boundaries has been inserted as a frontispiece to this report and these changes are briefly described in the following notes which record also the principal boundaries of the new wards.

Shettleston and Tollcross Ward has been reduced by about one-fifth, namely, the Tollcross area, which has been added to Parkhead Ward. Western parts of Parkhead Ward have been incorporated in Dalmarnock and Mile-end Wards. The Dalmarnock Ward is thus considerably increased, both in area—333 acres to 487 acres—and population from under 30,000 to over 40,000.

To Calton Ward has been added small parts of the former Mile-end, Whitevale and Exchange Wards. The rest of the Whitevale Ward has been incorporated with the remainder of Mile-end Ward to form the new Mile-end Ward. Dennistoun has been reduced by a small part to the west, but considerably enlarged by an area to the north of Alexandra Parade and extending to Royston Road as far as the railway at Provanmill, while the north-south railway at Alexandra Park forms the eastern boundary. The acreage has thus been increased from 280 to 689 but the population added is less than 4,000.

Very considerable alteration has been made in Provan Ward. The railway boundary of Dennistoun now becomes the western boundary of the new ward which incorporates the large landward area of the former Springburn Ward so that the acreage has been increased from 2,935 to 4,846, but the population has been reduced from 45,909 to 23,051.

Springburn Ward has thus been reduced from 4,741 acres to 2,118 and the population is lowered by nearly 3,000. Both the area and population of Cowlairs, although much smaller than Springburn, have been relatively considerably increased.

The whole of Townhead Ward is incorporated in the new ward which has acquired part of the old Dennistoun Ward between Cardross Street, etc., and Ark Lane and a part bounded by Alexandra Parade, Millburn Street and Royston Road.

The new Exchange Ward takes in the whole of the former Blythswood Ward, thus almost doubling the area and population ; the former populations of these wards were small and even now total less than 24,000.

Both Anderston and Park Wards have been increased by the addition of parts of Sandyford Ward, south and north of Kent Road respectively.

There is no change either in Cowcaddens or Woodside Wards but Ruchill Ward has lost the south-west corner, including Ruchill Park, and the populous district to the south of the canal which has been added to North Kelvin. Maryhill Ward is unchanged.

Kelvinside Ward has lost a built-up area between the Kelvin and Byres Road to Partick East Ward, which in turn, has been reduced by the district south of Dumbarton Road, now added to Partick West.

Considerable alterations of the ward boundaries have been made to the west of the city to form Whiteinch which has lost a considerable area to Kelvinside, Knightswood and Yoker, where the latter has been formed into a new ward largely at the expense of the former Knightswood and Yoker Ward.

South of the city no alteration has been made in Hutchesontown, Gorbals or Govanhill Wards. Camphill acquires from Pollokshaws a built-up area north and west of the two railways, while Langside has been extended to include the King's Park District of Cathcart.

Several adjustments have been made in the wards to the west and south of the river. The western boundary of Kingston has been removed west from Stanley Street to Sussex Street, etc., while the western boundary of Kinning Park has been transferred from Whitefield Road to Copland Road. Govan Ward has acquired a built-up area in Fairfield Ward between Craigton Road and Arklet Road.

Pollokshields Ward, which had become the largest in the city, with a population of nearly 56,000, has been divided in two, along the railway westwards from Paisley Road at Gower Street to form the new ward of Craigton.

Thus, three wards have disappeared, namely, Whitevale, Blythswood and Sandyford, and two new wards created, Yoker and Craigton, so that the total number of municipal wards now becomes 37 in place of 38.

The ward boundaries of Cowcaddens, Woodside and Maryhill to the north of the river, and Hutchesontown, Gorbals and Govanhill to the south of the river are not affected, while Dalmarnock, Calton, Townhead, Anderston, Park and North Kelvin on the north side of the river are all wholly within the new areas of these wards. To the south of the river Kingston, Camphill and Langside are also within the boundaries of the new wards of these names.

From a statistical point of view changes in the ward areas are unfortunate, as they upset comparison with the vital statistics of previous years.

In order to obtain estimates of the populations of the new municipal wards on which to base rates of mortality, etc., it has been necessary to devise some reasonably accurate method of arriving at the figures as the returns of the next census, probably in 1951, will not be available until about four or five years hence.

The method adopted is based on the numbers of the electorate, *i.e.*, those of over 21 years of age in each of the new municipal wards, from information supplied by the City Assessor. The total electorate, as shown on the next page, is 788,518. The difference between this figure and the estimate of the total estimated population is equivalent to 39·5 per cent., which is the proportion of children and young adults under 21 years of age. This percentage adjustment has therefore been added to the electorate in each ward but with variation, in order to make allowance for wards with high birth rates as compared with others where the population is barely maintaining itself.

The ward populations thus obtained are given in the table on page 22 where they are compared, as far as possible with the old ward areas or with the combined areas as embraced in the new municipal boundaries.

GLASGOW.—TABLE SHOWING COMPARISON OF ESTIMATED POPULATION AND AREA OF NEW MUNICIPAL WARDS COMPARED WITH FORMER WARDS.

Ward No.	Ward (1948 distribution).	No. of Local Government Electors (excluding Business Register).	Estimated Population 1948 (including Institutions and Harbour).	Estimated Population 1947 (in wards as then constituted).	Acreage.	
					Former (1947) Wards.	Present (1948) Wards.
1	Shettleston and Tollcross ...	28,134	39,345	46,313	1,473	1 167
2	Parkhead	15,767	22,346	39,520	883	819
3	Dalmarnock ...	29,281	40,931	29,907	288	487
4	Calton	20,950	28,757	25,148	333	404
5	Mile-end	28,149	39,224	19,150	191	443
	(Whitevale) ...	—	—	19,070	176	—
6	Dennistoun... ...	21,599	29,998	26,338	280	689
7	Provan	15,757	23,051	45,909	2,935	4 846
8	Cowlairs	20,844	29,903	22,266	456	645
9	Springburn ...	18,874	27,958	30,799	4,741	2 118
10	Townhead	26,491	37,616	24,776	175	301
11	Exchange	17,104	23,820	13,437	289	507*
	(Blythswood) ...	—	—	11,588	242	
12	Anderston	24,032	34,166	23,374	422	530
	(Sandyford) ...	—	—	17,078	152	
13	Park	22,032	31,005	20,710	272	317
14	Cowcaddens ...	19,964	27,688	29,527	488	488
15	Woodside	20,550	28,689	29,681	170	170
16	Ruchill	29,298	41,383	51,507	2,105	1.962
17	North Kelvin ...	20,288	28,347	20,091	146	278
18	Maryhill	18,248	25,202	27,524	2,210	2.210
19	Kelvinside	13,338	26,165	28,112	1.127	1,160
20	Partick (East) ...	20,781	29,446	25,531	268	351
21	,, (West) ...	20,263	28,315	21,866	357	464
22	Whiteinch	18,299	25,913	33.425	1.266	894
23	Yoker	21,478	29,792	37,658	2.647	1.213
24	Knightswood ...	12,593	17,578			1.614
25	Hutchesontown ...	22,336	31,240	34,536	387	387
26	Gorbals	27,889	38,849	38,823	252	252
27	Kingston	20,167	28,258	25.498	285	355
28	Kinning Park ...	21,367	30,092	31.309	379	402
29	Govan	24,873	34,748	35,875	529	489
30	Fairfield	17,672	25,629	33,074	1,403	1.351
31	Craigton	30,004	42,197	55,857	4,837	1.566
32	Pollokshields ...	18,103	26,534			3,239
33	Camphill	20,021	27,753	18,191	366	481
34	Pollokshaws ...	18,002	25,299	28,192	3.324	3,223
35	Govanhill	20,879	29,320	29,814	365	365
36	Langside	20,507	28,988	17,944	557	801
37	Cathcart	17,584	24,455	30,582	2.949	2,737
	City	788,518	1,110,000	1,100,000	39,725	39,725

* A small portion has been transferred to Calton Ward.

Ward Populations.—Comparison of the estimates of the population with those of the previous year can only be made in respect of the five wards where the boundaries remain the same and perhaps also in those groups where the combined areas are coincident with former groups, *i.e.*, the new Anderston and Park Wards which together embrace the former three wards of Anderston, Sandyford and Park ; Camphill and Pollokshaws ; and Langside and Cathcart.

The former Pollokshields and Ruchill Wards had populations of over 50,000, while Shettleston and Tollcross and Provan had more than 45,000. Under the new redistribution, three wards have estimated populations slightly in excess of 40,000, namely, Dalmarnock—40,931 compared with 29,907 for the former area, Ruchill—41,383 against 51,507, and Craigton—42,197 (part of the former Pollokshields Ward and almost entirely occupied by Corporation housing schemes) ; the remainder of Pollokshields has 26,534.

Exchange Ward has an estimated population of 23,820 compared with a total of 25,025 for the previous ward of that name (less a small portion transferred to Calton) and the whole of Blythswood. Anderston and Park Wards have a combined population of 65,171 compared with a total of 61,162 for the former wards plus Sandyford. The population of the combined wards of Camphill and Pollokshaws, 53,052, compares with 46,383, while a similar comparison for Langside and Cathcart is 53,443 against 48,526. In these areas a considerable number of new houses have been built recently, including temporary erections.

Wards in which boundaries have not been altered are Cowcaddens, 27,688 (29,527) ; Maryhill, 25,202 (27,524) ; Hutchesontown, 31,240 (34,536) ; Gorbals, 38,849 (38,823) ; and Govanhill, 29,320 (29,814). (The estimated populations of the previous year are given in brackets.)

Details of the ward populations are given in Table I in the appendix.

Institutional Population.—A special census of the persons resident in institutions is taken each year at 30th June. In 1948 the total was 31,385 which compares with 33,577.

The number in Springburn Ward is now 2,710 compared with 4,683 because of the transfer of Gartloch to Provan Ward and a reduction in the number of residents in Stobhill and Robroyston Hospitals.

Exchange, 4,321 against a total of 4,510, now includes a larger number of hotels and model lodging houses, as well as the Maternity Hospital. Fairfield Ward institution population numbers 1,657, including, as it does, the Southern General Hospital and the infectious diseases hospital at Shieldhall.

The large institutional population in Pollokshields Ward is explained by the inclusion of Hawkhead Mental Hospital and Crookston Home which still remain within the area of the new Pollokshields Ward.

In the remainder of the wards there has not been much alteration as shown by the detailed statement in Appendix Table I.

Acreage.—The total area of the city remains the same at 39,725 acres. Considerable changes have taken place in most of the wards following the redistribution of the areas. The number of acres in each ward is given in Appendix Table I and a comparison of the acreages is given in the table on page 22. The principal changes are Shettleston and Tollcross, 1,167 (1,473) ; Dennistoun, 689 (280) ; Provan, 4,846 (2,935) ; Cowlairs, 645 (456) ; Springburn, 2,118 (4,741) ; Whiteinch, 894 (1,266), all north of the river, and Pollokshields, 3,239 (4,837) and Langside, 801 (557) south of the river. (The figures for the former areas are given in parenthesis.)

Density.—The density of the total city remains at 28 per acre. The alterations of areas mentioned above has resulted in consequential variations in densities in the respective wards. The number of persons per acre in Ward 1 (Shettleston and Tollcross) is now 34 against 31, and Parkhead 27 compared with 45. Dalmarnock has been reduced from 104 to 84 and Mile-end (100) and Whitevale (108) to 89 in the new Mile-end Ward. Dennistoun is now 44 (94) and Provan 5 against 16. Townhead has been reduced from 141 to 125 but Woodside is little changed, 169 against 174. North Kelvin, because of the inclusion of Ruchill Park, is now 102 whereas formerly the figure was 137. South of the river, Gorbals remains unchanged at 154. There are now only four municipal wards with a density greater than 100, whereas formerly there were eight wards in that category.

Occupied and Unoccupied Houses.—The City Assessor's return of occupied houses as at Whitsunday, adjusted for inhabitant occupiers and shops used as houses, etc., totals 293,814 compared with 291,407, an increase of 2,407. The distribution of these throughout the municipal wards of the city is given in Appendix Table II. The differences there given, *i.e.*, increases or decreases, are more than indications of the changes which have been made in the redistribution of wards; in other words, the comparisons are not with the same areas except in the wards which have not been altered. Those are Woodside (decrease, 14), Maryhill (increase, 11), Hutchesontown (no change), Gorbals (decrease, 49), Govanhill (decrease, 5).

Pollokshields and Craigton show a combined increase of 1,186, an indication of the amount of building in Craigton, almost entirely in Corporation housing schemes.

Unoccupied Houses.—There were 314 empty houses in the city, compared with 308 at the middle of the previous year, and 78 of these were in Kelvinside Ward, 26 in Park Ward, and 23 in Partick East which now includes a considerable portion of the former area known as Hillhead, previously in Kelvinside Ward. Vacant houses in these wards are mostly of the large size, many of them converted into flats and let furnished or unfurnished. In Kelvinside Ward the return indicates that 31 empty houses are of one apartment and 21 of two apartments and in North Kelvin there are 11 one-apartment houses unlet, most of them probably of the converted flat type.

Altogether, there were 94 one-apartment and 67 two-apartment houses unoccupied and of larger size—five apartments and over—70 returned as unlet out of the total of 314.

NUMBER OF UNLET HOUSES.

One apartment	94
Two apartments	67
Three apartments	46
Four apartments	37
Five apartments and over	70
	314

Most of the small houses remaining empty are in the uninhabitable category and some may be of the furnished flat type. Many of the houses of five and more apartments are of large residential type with high rental.

Dean of Guild Linings.—The scarcity of certain building materials and the high prices, together with the difficulties of obtaining sufficient tradesmen or even semi-skilled men for building resulting from the war and now the concentration on the export drive have to a large extent retarded efforts to overtake the housing shortage. The cost of building houses is excessive at the present time for even temporary erections cannot be produced for less than about £1,500 for small minimum-sized homes of three to four apartments.

Last year to 31st August, 1948, the number of linings granted was only 571, compared with 1,430 for the preceding twelve months. Of these 54 were in respect of single apartments in a hostel for women and 24 of two apartments for old folk in Queen's Park district.

Details of the numbers of various sizes of houses for which linings were granted are given in Appendix Table III compared with previous years back to 1919-20. There were only 126 for houses of three apartments and 365 of four apartments.

There are at the present time nearly 100,000 applicants for Corporation houses, a figure which represents between 30 and 40 per cent. of the total number of houses in the city. On the basis of depreciation alone, at least 3,000 houses would be required every year for replacements of buildings and years of war and its aftermath have multiplied that number many times.

METEOROLOGY.

The weather conditions during 1948 were mild. There were no excessively low temperatures, the lowest recorded being 25°F. in both January and November, whereas in 1947 during the very cold Spring 9°F. were recorded in February and 8°F. in March. The average temperature of the first quarter of the year was 40°F., compared with 32°F. for the previous year, the period of the year when severe conditions usually take a considerable toll of life, especially among the very young and very old members of the population. The year 1948, therefore, was generally favourable to life as is evidenced by the record low general death rate and the infant mortality rate which are described in the next section of this report. The mean temperature over the whole year was 48·1°F., compared with 46·7°F. in 1947 and is definitely above the average for the past decennium. The absence of frosts was notable.

This mildness was associated with much rain, especially during the autumn months when 6·61 inches were recorded in August, 6·60 inches in September, and 5·19 inches in October. There was also a considerable rainfall in the early months of the year and again in December. The total for the whole year was the heaviest recorded over the past fifty years at 53·33 inches which compares with 38·63 inches during the previous year. The previous highest record was 49·75 inches in 1938 when the International Exhibition was held in Glasgow. Rain was recorded on 233 days. There were 26 days in January when rain was recorded, followed by September with 24 days, while August and October both had 22 rainy days.

Sunshine was rather above the average—1,157 hours compared with 1,086 for 1947. This improvement was due to the 220 hours recorded in May and 190 hours in July. There were few extended spells of good weather. August was unusually dull, only 73 hours of sunshine being recorded during the whole month compared with 239 for the same month of 1947.

Fog was prevalent in considerable density and persistency during the first three months of the year ; it was also prevalent during November and December.

HEALTH LECTURES, 1948-49.

The emergence of the new Health Service and the discontinuance of the Glasgow Burgh Insurance Committee had disrupted the co-operation which had existed between that Committee and the Health Committee of the Corporation for the organisation of health lectures and health propaganda. The efforts of that Committee have extended over a period of more than thirty years since its inception in 1917, after the issue of the Report of the Commission of Enquiry into Venereal Diseases. Courses of central and district lectures on general health matters were started after a few years of concentration on venereal diseases, a movement which was afterwards followed generally throughout the country and which has quite recently become the pattern adopted by the Government and provided for in the National Health Service (Scotland) Act of 1947. The Department, however, has continued to meet the increasing demand by church and co-operative guilds, trade union societies and other organisations for talks on health subjects. The medical staff of the Department undertook many of these, while health visitors extended their propaganda work at clinics. For the first time parentcraft courses were organised in two of the child welfare centres, one in Partick Clinic, Sandy Road, and the other in Camphill Centre in Balvicar Street. This course extended to six evening lectures given during the months of February and March, 1949.

Exhibitions.—The Department co-operated in two exhibitions in the Kelvin Hall organised by the Corporation. In the " Modern Homes Exhibition " held during the winter of 1947-48 when comparison between the old and the new style of housing was illustrated by models of a modern housing scheme and of a congested area and the improvement in the internal aspect of houses was shown for the first time to many children who had been born and brought up in Corporation houses during the was. The activities of the Disinfestation unit which has been set up since the end of the war was illustrated by enlarged models of insects and the method now taken to exterminate them. X-ray plates and picturesque charts of health statistics completed the exhibit.

In the Spring of 1949 the Department again took up a large area in the " Glasgow To-day and To-morrow " Exhibition by featuring a modern day nursery, illustrating the extended provision in the city of accommodation of that nature for the convenience of mothers who are taking part in the industrial effort. Over 1,800 children of parents visiting the exhibition were cared for during the three weeks. A former nursery matron undertook the task with the voluntary assistance of young women from the day nursery staffs and girls attending the pupil class in nursing at the Logan & Johnstone School organised by the Education Department. A chart gallery formed part of the health cinema in which films prepared by the Department, along with those obtained from the Central Film Library and a number supplied by the British Railways Publicity Department under the caption of " Holidays for Health " were described in recorded talks—

" The New Health Service " by Dr. Stuart Laidlaw, Medical Officer of Health ;
" Child Welfare Services " by Dr. Nora Wattie, Senior Assistant Medical Officer ; and
" Statistics of Health " by Mr. William McKean, Secretary to the Department.

Audiences of up to 150 persons were present at those sessions. Much propaganda was effected by the issue of leaflets published by the Central Council for Health Education.

BLIND PERSONS ACTS.

During the year under review 437 persons were examined by the Regional Clinic for the first time, of whom 342 were examined at the clinic and 95 at home. In addition 97 applicants were re-examined, making for the year a total of 534 cases examined.

Certified Blind.			Rejected.			Re-examinations.	Grand Total.
Males.	Females.	Total.	Males.	Females.	Total.		
154	148	302	75	60	135	97	534

Of the 437 cases examined for the first time, 69·1 per cent. were certified blind within the meaning of the Act.

Sources of Candidates.—The source of candidates is shown as follows :—

Applicants for Blind Pension	85
Applicants for increased National Assistance	237
Applicants for Technical Training	11
Applicants for Free Tramway Pass	1
Applicants referred by Mission to Outdoor Blind ...	97
Unclassified	6

As in previous years it will be noted that the largest number examined was in connection with applications for increased National Assistance.

TABLE A.

SHOWING THE AGE AND SEX INCIDENCE OF APPLICANTS CLAIMING TO BE BLIND EXAMINED AT THE CERTIFYING CLINIC DURING THE YEAR 1948.

Age.	Certified.			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
–1	—	—	—	—	—	—
1-4	2	—	2	—	—	—
5-15	2	2	4	1	1	2
16-29	5	6	11	1	3	4
30-39	2	8	10	4	2	6
40-49	18	8	26	7	8	15
50-59	22	22	44	6	15	21
60-69	36	43	79	17	10	27
70+	67	59	126	39	21	60
	154	148	302	75	60	135

From the foregoing table it will be seen that 81·7 per cent, of the applicants were over 50 years of age and 42·6 per cent. were 70 and over. The males outnumbered the females.

TABLE B.

SHOWING THE ALLOCATION OF THE APPLICANTS EXAMINED DURING 1948 AT THE CERTIFYING CLINIC AMONG THE LOCAL AUTHORITIES COMPOSING THE JOINT-COMMITTEE FOR THE BLIND FOR GLASGOW AND THE SOUTH-WEST OF SCOTLAND.

	Certified.			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
Glasgow	56	54	110	33	31	64
Airdrie	4	1	5	5	2	7
Coatbridge... ...	13	10	23	6	5	11
Hamilton	3	2	5	2	1	3
Motherwell & Wishaw	8	5	13	2	1	3
Rutherglen ..:	1	1	2	3	1	4
Other Lanarkshire	17	18	35	6	5	11
Greenock	8	6	14	4	2	6
Paisley	6	7	13	7	1	8
Port Glasgow ...	2	2	4	—	2	2
Other Renfrewshire	1	8	9	1	1	2
Dumbarton ...	1	1	2	—	—	—
Clydebank ...	3	2	5	1	—	1
Other Dunbartonshire	5	3	8	1	—	1
Falkirk	2	—	2	—	2	2
Stirling	—	1	1	—	—	—
Other Stirlingshire	2	3	5	—	—	—
Ayr	2	1	3	—	—	—
Kilmarnock ...	3	2	5	1	1	2
Other Ayrshire ...	10	8	18	—	4	4
Argyll County ...	5	12	17	1	—	1
Bute County ...	—	1	1	—	—	—
Dumfries Burgh ...	2	—	2	2	1	3
Not stated ...	—	—	—	—	—	—
Total ...	154	148	302	75	60	135

Of the applicants examined 174 or 39·8 per cent. resided in Glasgow, compared with the corresponding percentage of 48·5 during the preceding year.

In 1948, 97 cases were re-examined. The alterations in the decisions of the clinic as a result of re-examination were as follows :—

(*a*) Certified blind on first examination and decision unaltered on re-examination	8
(*b*) Certified blind on first examination and decision reversed on re-examination	4
(*c*) Certified not blind on first examination and decision unaltered on re-examination	14
(*d*) Certified not blind on first examination and decision reversed on re-examination	45
(*e*) Certified blind on second examination and decision unaltered on re-examination	2
(*f*) Certified blind on second examination and decision reversed on re-examination	2
(*g*) Certified not blind on second examination and decision unaltered on re-examination	12
(*h*) Certified not blind on second examination and decision reversed on re-examination	10
Total	97

Follow-up Scheme.—During the past few years a scheme has been in operation to follow up those patients examined at the Regional Clinic and considered by the examining surgeons as likely to benefit from further treatment. The scheme has been made possible by the co-operation of the Mission to the Outdoor Blind for Glasgow and the South-West of Scotland. The home teachers make special enquiries twice yearly regarding such patients and report progress. Where operative or other treatment has been completed, the patient is summoned to the clinic for examination and the improvement or otherwise noted. During the year the teachers investigated 51 cases certified blind with the following results :—

	TREATMENT CARRIED OUT.				NOT CARRIED OUT.			
Treatment Recommended.	No. of Cases.	Still Blind.	Not now Blind.	Total.	Died.	Unwilling.	Unfit.	Others.
Surgical	48	1	2	3	4	15	14	12
Medical	3	—	3	3	—	—	—	—
	51	1	5	6	4	15	14	12

The large group entitled in the table " unwilling " is composed mainly of elderly people who do not feel inclined, owing to their advanced age, to undertake an operation. The group " others " numbering 12 in the table consists of patients who for some medical reason are not yet ready for operative procedures, *e.g.*, patients whose cataract has not yet " matured."

TABLE C.

CAUSES OF BLINDNESS.

The causes of blindness of the 302 cases certified blind during 1948 are shown in the following table :—

Congenital and Undetermined—

Congenital abnormalities (10) and developmental defects (7) ...	17
Tumour of globe and orbit	—
Myopia	39
Other errors of refraction	—
Glaucoma, primary	37
Cataract, primary	102
Other primary ocular defects (primary detachment)	2

Infectious and Toxic—	
(*a*) Exogenous :	
Ophthalmia neonatorum	1
Trachoma	—
Local septic infection of coats of eye	3
Other local specific infections (gonorrhoea) (mycosis)	—
(*b*) Endogenous :	
Gonorrhoea	—
Syphilis, congenital	6
Syphilis, acquired, including not definitely congenital	5
Specific fevers (smallpox—1)	—
Meningitis (non-tuberculous), including cerebro-spinal fever	—
Tuberculosis	—
Phlyctenular, strumous and similar, not definitely tuberculous	4
Septicaemia, acute	—
Septicaemia, chronic ; autotoxic, focal sepsis	21
Other general infections and organismal diseases	2
Traumatic and Chemical—	
Birth trauma	1
Non-industrial trauma	5
Industrial trauma	4
War trauma	1
Trauma, category not ascertainable	1
Chemico-toxic, non-industrial (tobacco)	1
Scheduled industrial diseases (lead) (pyroxylin) (carbon bi-sulphide) (aniline) (phosphorus) (glass-blowers' cataract) (metal workers' cataract) (miners' nystagmus)	—
Sympathetic ophthalmia	—
Systemic Diseases—	
Anaemia and blood diseases	—
Diabetes	12
Nephritis	1
Pregnancy	—
Vascular diseases including cerebral vascular lesions	28
Intracranial neoplasm	1
Other diseases of central nervous system	6
Functional disturbances (hysteria) (malingering)	—
Other general diseases	—
Not Ascertainable Definitely	2
Total	302

The largest number is included in the category " Congenital and Undetermined " and the most important individual causes of blindness are still glaucoma, cataract, myopia and septicaemia.

MENTAL SERVICES

On the coming into operation of the National Health Service (Scotland) Act, 1947, the following letter was issued to all general practitioners engaged in the National Health Service.

> Under the terms of the Mental Health Services section of the National Health Service (Scotland) Act, 1947, the local authority is responsible for the ascertainment and certification of persons within the area who are mentally defective or who are of unsound mind. It is also the duty of the local authority to make arrange-

ments for the transfer of such persons to a certified institution or to a mental hospital, or, in suitable cases, for their placement under guardianship, should they, by reason of their mental condition, require supervision for their own protection or for the protection of others.

The Corporation of Glasgow (Public Health Department) have a qualified staff of medical officers and welfare officers available for this purpose. If a practitioner wishes a patient admitted to a mental hospital, or to a certified institution, or placed under guardianship, it is requested that he or she communicate with the Director of Welfare Services, Mental Patients Department, 266 George Street, Glasgow (Telephone Number Bell 3480, present extension 270).

Arrangements will then be made for the completion of the Medical Certificates, for the securing of the Sheriff's sanction, and for the removal of the patient. It would also be of advantage if, at the same time, the relatives were asked to make formal application to the aforementioned department so that personal details of the patient and necessary signatures could be obtained. In cases where this is impossible, the Welfare Officer would visit the house.

The normal hours of the department are from 9 a.m. to 5 p.m., Saturdays from 9 a.m. to 12.30 p.m., but states of serious emergency will be dealt with at any time outwith these hours. It will, of course, be to everyone's advantage if cases could be notified, when possible, in the early forenoon as this would ensure the most efficient completion of the legal documents and the most satisfactory transfer of the patient to the appropriate institution.

Under the terms of the National Health Service (Scotland) Act, 1947, the outdoor administration of the Lunacy and Mental Deficiency Acts remains the function of the Local Authority.

In accordance with a scheme presented by the Medical Officer of Health and approved by the Secretary of State for Scotland, four senior medical officers with experience of Lunacy and Mental Deficiency administration were appointed. Their duties commenced when the new Act came into force on 5th July, 1948.

Responsibility is vested in the medical officers for the statutory quarterly visitation of boarded-out mental defectives, and the supplying of various special reports on cases as required by the Board of Control.

The boarded-out mental defectives in the city number 951, and their regular visitation and supervision entails a considerable amount of work, particularly, as in many instances, when several visits are necessary to contact the patient and record the visit.

In addition, the Board of Control issues requests for special reports on patients' suitability for continued guardianship, removal to an institution or discharge. The great majority of the boarded-out mental defectives are housed and cared for in good conditions. There are cases, however, where the housing conditions are modestly described as " fair," but generally suggestions from the visiting medical officer effect a definite improvement. It should be noted that 139 new cases were added to the roll during the six months under review. This represents a substantial increase, and would indicate that a fuller use is being made of the service by the public in response to the provisions of the new Health Act. The main statistics in regard to visitation of mental defectives boarded-out in the City are as follows :—

Total visits, 5th July to 31st December, 1948	2,578
Made up as follows—	
Statutory visits	1,899
Repeat visits	336
Visits *re* special reports	343

Lunacy certification forms an integral part of the work of the Department. A circular letter explaining the details of the procedure to be followed in applying for a patient's mental certification was sent to general practitioners in the city. In most instances, the prescribed conditions are fulfilled, but cases arise from time to time where there are no relatives or Health Service doctor in attendance. In this extremity, the Welfare Department is entitled to act, and does so—thus assisting the patient towards care, health and protection.

Certification of the insane in H.M. Prisons at Duke Street and Barlinnie is undertaken in addition to mental certification in the four areas of the city, This latter work involves a twenty-four hours' continuous service to meet the needs of the public and the general practitioners. It is fonnd that many cases are more suitable for admission to the mental observation wards of a general hospital. The Regional Hospital Board is responsible for the disposal of the case into hospital, and close and cordial co-operation exists between the Department and the officers dealing with removals. Urgent cases receive due consideration.

The statistics of the first six months are appended. They show an all-round increase, particularly in the number of domiciliary cases recommended by general practitioners and accepted for full certification after consultation with the certifying officer. One inference from the figures is that the practitioner now more readily accepts the inevitability of full certification without the procrastination that a period of mental observation usually involves. This upward trend is even more noticeable in the current period and would indicate that, as increased accommodation becomes available in mental institutions, psychiatric units in general hospitals will fulfil the purpose originally intended for them—particularly as regards treatment. This should surely assist in alleviating the grievance expressed by psychiatrists in previous annual reports on this subject.

The following table gives the relevant particulars of lunacy work from 5th July till 31st December, 1948—

	Prisons		City		
	Male.	Female.	Male.	Female.	Total.
Certified	56	15	24	62	157
Cancelled	2	1	2	7	12
Recommended mental observation ...	—	2	5	16	23
Hospitalisation not recommended ...	3	1	6	18	28

Mental Observation Cases.—The following table is interesting as indicating the results obtained by treatment in the mental observation wards of the three general hospitals. The figures vary considerably but generally it may be said that apparently an average of about 50 per cent. are either cured or improved by this preventive treatment.

		Condition on Dismissal.					
Year Dismissed		Cured.	Im-proved.	No Change.	Worse.	Died.	Total Dismissed.
1933	Stobhill Hospital ...	85	423	338	80	138	1,064
	E. D. Hospital ...	69	75	176	50	54	424
	S. G. Hospital ...	21	43	38	9	8	119
Per cent.		*10.9*	*33·7*	*34·3*	*8·6*	*12·4*	
1935	Stobhill Hospital ...	142	376	300	49	164	1,031
	E. D. Hospital ...	56	68	74	17	52	267
	S. G. Hospital ...	13	29	41	3	8	94
Per cent.		*15·2*	*34·0*	*29·8*	*4·9*	*16·1*	
1940	Stobhill Hospital ...	79	415	197	21	192	904
	E. D. Hospital ...	10	63	42	13	24	152
	S. G. Hospital ...	46	177	147	9	102	481
Per cent.		*8·8*	*42·6*	*25·1*	*2·8*	*20·7*	
1945	Stobhill Hospital ...	38	237	126	38	211	650
	E. D. Hospital ...	17	28	18	15	25	103
	S. G. Hospital ...	159	247	247	6	102	761
Per cent.		*14·1*	*33·8*	*25·8*	*4·0*	*22·3*	
1947	Stobhill Hospital ...	96	173	131	13	148	561
	E. D. Hospital ...	43	24	22	13	28	130
	S. G. Hospital ...	52	208	167	3	88	518
Per cent.		*15·8*	*33·5*	*26·5*	*2·4*	*21·8*	
1948	Stobhill Hospital ...	41	233	143	26	137	580
	E. D. Hospital ...	32	67	29	7	25	160
	S. G. Hospital ...	28	218	133	4	92	475
Per cent.		*8·3*	*42·6*	*25·1*	*3·1*	*20·9*	

LEGISLATION.

The following Acts of Parliament, Regulations, etc., dealing directly with Public Health in Scotland, or having a bearing thereon, came into operation during the year :—

Factories Act, 1948, amends the Act of 1937, and provides for matters consequential on the amendment of that Act (*e.g.*, medical supervision of young persons, extension to employments outside factories, prevention of danger in factories, designation of factory doctor, provision of seats, etc., etc.).

National Assistance Act, 1948, terminates the existing poor law and provides in lieu thereof for the assistance of persons in need by the National Assistance Board and by Local Authorities ; makes further provision for the welfare of disabled, sick, aged and other persons and for regulating homes for disabled and aged persons and charities for disabled persons ; amends the law relating to non-contributory old-age pensions ; makes provision as to the burial or cremation of deceased persons ; and for purposes connected with the matters aforesaid.

Nurseries and Child-Minders Regulation Act, 1948, provides for the regulation of certain nurseries and of persons who for reward receive children into their homes to look after them ; and for purposes connected with the matters aforesaid.

CIRCULARS, ORDERS, REGULATIONS, ETC., ISSUED IN 1948.

S.I.=Statutory Instrument.

Children—

S.I. 2595 (S. 196) of 26/11/48. Voluntary Homes (Registration) (Scotland Regulations, 1948.

Food—

S.I. 1434 (S. 116) of 26/6/48. Public Health Imported Food Amendment (Scotland) Regulations, 1948.

S.I. 1433 (S. 115) of 26/6/48. Public Health Imported Food Amendment (Scotland) Regulations, 1948.

D.H.S. Circular 136 of 12/11/48. Public Health (Meat) Regulations (Scotland), 1932. (Cysticerus Bovis in Cattle).

Housing—

S.I. 2225 (S. 173). Housing (Declaration of Unfitness) (Scotland) Regulations, 1948.

Infectious Disease, etc.—

D.H.S. Circular 40 of 30/4/48. International Certificates of Vaccination and Inoculation Authentication.

D.H.S. Circular 8 of 9/1/48. Defence (General) Regulation 33A Scabies Order, 1941.

S.I. 1435 (S. 117) of 26/6/48. Public Health (Aircraft) (Scotland) Regulations, 1948.

D.H.S. Circular 112 of 30/8/48. Public Health (Aircraft) (Scotland) Regulations, 1948.

Local Government—

S.I. 2328 (S. 189) of 18/10/48. Change of Name and Alteration of Areas (Scotland), 1948.

Maternity Services—

D.H.S. Circular 60 of 18/6/48. Domiciliary Maternity Transitional Arrangements.

D.H.S. Memo. 69 of 30/6/48. National Insurance Act, 1946. Maternity Benefit.

D.H.S. Circular 81 of 5/7/48. Midwives (Scotland) Acts, 1915 and 1927; Maternity Services (Scotland) Act, 1937. Fees for Medical Practitioners called in by Midwives.

S.I. 1431 (S. 113) of 26/6/48. Medical Practitioners (Fees) (Scotland) Regulations, 1948.

Milk—

D.H.S. Circular 17 of 11/2/48. Milk (Special Designations) Orders (Scotland), 1936-1944. Single Intradermal Comparative Test.

D.H.S. Circular 20 of 27/2/48. Scottish Milk Testing Scheme and

D.H.S. Memo. 9/46. Amendment No. 1, 1948.

S.I. 960 (S. 68) of 5/5/48. Ice-Cream (Scotland) Regulations, 1948.

D.H.S. Circular 43 of 14/5/48. Ice-Cream (Scotland) Regulations, 1948, and Memo. 43 Tech., 1948.

D.H.S. Circular 131 of 15/10/48. Ice-Cream (Scotland) Amendment Regulations, 1948.

National Assistance—

S.I. 2095 (S. 167) of 11/9/48. Powers of Inspection (Scotland) Regulations, 1948.

D.H.S. Circular 38 of 29/4/48. Administrative Arrangements of Local Authorities.

S.I. 1207 (S. 93) of 7/6/48. National Assistance Act (Appointed Day) (Scotland) Order, 1948.

S.I. 1491 (S. 125) of 30/6/48. Charges for Accommodation (Scotland) Regulations, 1948.

S.I. 1334 (MNI 130) of 22/6/48. Determination of Need Regulations, 1948.

D.H.S. Circular 51 of 1/6/48. National Assistance Act, 1948.

National Health Services—

S.I. 344 (S. 24) of 24/2/48. Appointed Day Order, 1948.

S.I. 412 (S. 28) of 27/2/48. Superannuation Regulations, 1948.

D.H.S. Circular 24 of 6/3/48. Transfer of Staff.

D.H.S. Circular 30 of 18/3/48. Cancer Act, 1939, and National Health Service (Scotland) Act, 1947.

S.I. 844 (S. 56) of 22/4/48. Scottish Health Services Council and Standing Advisory Committees Regulations, 1948.

D.H.S. Circular 39 of 28/4/48. National Health Service Publicity.

S.I. 1257 (S. 94) of 12/6/48. General Dental Services (Scotland) Regulations, 1948.

S.I. 1258 (S. 95) of 12/6/48. General Medical and Pharmaceutical Services (Scotland) Regulations, 1948.

D.H.S. Circular 76 of 6/7/48. Records, etc., *re* Diphtheria Immunisation and Vaccination.

S.I. 1677 (S. 147) of 17/7/48. Local Health Authority Charges (Scotland) Regulations, 1948.

D.H.S. Circular 94 of 28/7/48. Charges for certain supplies and services.

S.I. 2231 (S. 174) of 1/10/48. Charges for Appliances (Scotland) Regulations, 1948.

D.H.S. Circular 101 of 10/8/48. Salaries of Nurses and Midwives Exchequer Grant.

D.H.S. Circular 108 of 9/8/48. Training of Domiciliary Midwives and Home Nurses.

Nursing—

S.I. 323 (S. 23) of 18/2/48. General Nursing Council for Scotland Rules, 1948, Approval Instrument.

Pharmacy—

S.I. 1735 of 23/7/48. Streptomycin Regulations, 1948.

Memo. D.D. 101 (5th edn. Oct., 1948.) Dangerous Drugs 1920-1932 Duties of Doctors and Dentists.

S.I. 2653 of 6/12/48. Dangerous Drugs Regulations, 1948.

Public Health—

Aliens Order, 1920. Instructions to Medical Inspectors, 1948.

School Health Service—

D.H.S. Circular 99 of 6/8/48. Annual Selection of Age Groups for routine medical inspection.

D.H.S. Circular 113 of 7/9/48. The School Health Service and the National Health Service.

Tuberculosis—

D.H.S. Circular 35 of 12/4/48. Tuberculosis Allowances Scheme.

B.L.A. 4/48 of 10/6/48. National Assistance Act. Payment of National Assistance to persons in receipt of T.B. allowances.

B.L.A. 8/48/ of 10/7/48. Do. do. do.

D.H.S. Circular 57 of 14/6/48. Tuberculosis Allowances Scheme.

Venereal Disease—

S.I. 1320 (S. 100) of 21/6/48. Public Health (Venereal Disease) (Scotland) Revocation Regulations, 1948.

D.H.S. Circular 79 of 5/7/48. Venereal Disease. Revocation of the Public Health (Venereal Diseases) Regulations (Scotland), 1916.

SECTION II.

VITAL STATISTICS.

Despite the fact that the average age constitution of the population is increasing appreciably, the standard of health as measured by the mortality rates is still improving. In the Annual Report for 1945 this age factor was dealt with in some detail in order to demonstrate by pyramid diagrams the numbers of persons in the population at older ages, especially those over 65 years of age, at which age many more people are now retiring from active participation in commerce and industry with the more widespread inauguration of superannuation schemes. This matter is also of importance from the financial aspect because of the introduction of old age pensions schemes on a national basis. The numbers of persons in the city now over 65 years of age is estimated at 80,000, 35,000 males and 45,000 females. This figure is nearly double that returned at the 1921 Census. The principal vital statistics which are given in Appendix Tables I—XVIII are here summarised for comparison with those of previous years.

SUMMARY.

	1944.	1945.	1946.	1947.	1948.
Population	1,050,000	1,050,000	1,075,000	1,100,000	1,110,000
Acreage	39,725	39,725	39,725	39,725	39,725
Persons per acre	26	26	27	28	28
Number of Inhabited Houses	288,780	289,028	289,655	291,407	293,814
Deaths—Number registered	15,779	15,112	15,561	16,412	14,638
Deaths—After correction for Transfers ...	14,603	13,941	14,502	15,267	13,620
Births—Number registered	22,695	21,296	25,391	27,237	22,917
Births—After correction	22,203	20,294	23,560	25,829	22,292
Death rate per 1,000 living—All causes ...	13·91	13·27	13·49	13·88	12·27
Birth rate per 1,000 living	20·21	19·33	21·92	23·48	20·08
Deaths under One Year—After correction ...	2,108	1,379	1,588	1,989	1,241
Deaths under One Year—Per 1,000 births ...	95	68	67	77	56

In view of the alteration of ward boundaries during the year the statistics have been recast in order to bring them up to date in respect of the new municipal wards.

BIRTHS.

With the upset of the family relations of the population over ten years of world war and demobilisation, and the continuance of conscription, there have been considerable variations in the birth rate.

These variations however, have not been nearly so marked as those following the 1914-18 war for the birth rate then rose in 1920 to 31·5 per 1,000 of population whereas the peak reached this time was only 23·5 in 1947. The rate has now declined to 20·08 which is regarded as about normal. The total number of births was 22,292, with corrections for transfers, compared with the corresponding figure of 25,829 in 1947.

The highest rate recorded in any one ward was 27·8 in Gorbals, followed by Govan with 26·7, Dalmarnock, 26·4, Cowcaddens, 26·2 and Mile-end and Hutchestown, both over 25. The lowest rate, 10·96, occurred in Kelvinside, and other low rates were 12·3 in Pollokshields, 12·4 in Cathcart, 12·7 in Park, and 12·8 in Camphill. The ward rates are given in Appendix Table V against the rates for the previous year of what were the approximate corresponding ward areas. There are some considerable reductions—for instance, Provan rate is down from 24·2 to 16·4, Exchange (with the former ward of Blythswood), 19·3 against 27·7, Park, 12·7 against 24·2, while in the new Craigton ward the rate is 14·4, and the remainder of Pollokshields, 12·3 compared with 20·3 for the combined areas in 1947.

Illegitimate Births.—The number of illegitimate births recorded during the year was 1,265 which represents a rate of 5·7 per cent. on the total of 22,292 births. For the previous year the percentage was 5·2, the lowest recorded in the city.

The number registered in each municipal ward and the respective percentage are given in Table V of the appendix. The highest rate is 13·2 in Park Ward where there are a few homes for unmarried mothers, while in Exchange Ward in which is located a large maternity hospital the rate was 12·6. Apart from these two wards the highest illegitimate rates were 9·2 in Gorbals, 7·5 in Calton and 7·4 in Woodside. The lowest rate was 2·0 in Cathcart followed by Langside with 2·1.

MARRIAGES.

During the year 1948 there were 11,035 marriages against 10,978 for the previous year. These figures may be compared with 14,581 marriages which took place in 1940, which was the highest number recorded for many years. These rates are above the average as will be seen from the following statement which gives the rates since 1871 :—

Marriages per Thousand Persons Living :

1871-1880	9·1	1939	11·7
1881-1890	9·3	1940	13·9
1891-1900	9·4	1941	12·1
1901-1910	8·8	1942	11·9
1911-1920	9·7	1943	9·7
1921-1931	8·9	1944	9·3
1931-1935	8·8	1945	11·9
1936	9·2	1946	10·3
1937	9·5	1947	10·0
1938	9·7	1948	10·0

DEATHS.

The number of deaths registered in the city during the year was 14,638 which is reduced to 13,620 when adjustments are made for inward and outward transfers. The corrected figure therefore represents a death rate of 12·27 per thousand of the population compared with 13·88 in 1947. This is the lowest rate ever recorded in the city, the previous record being 13·3 recorded in 1945 and 1938.

The number of deaths in each municipal ward of the city is given in Appendix Table VI with the death rates compared with the rates for the two preceding years. The highest ward death rate was 14·0 in Calton, followed by Exchange with 13·9. The only other wards with a rate exceeding 13 were Govan and Maryhill. The lowest rate 9·5 was in Craigton followed by 9·9 in Yoker and 10·0 in Kelvinside. The following statement summarises the death rates since 1881.

GLASGOW.—ALL CAUSES.—DEATH RATE PER 1,000 LIVING.

1881-1890	24·22	1941	15·59
1891-1900	21·53	1942	14·04
1901-1910	19·56	1943	14·18
1911-1920	16·36	1944	13·91
1921-1925	15·49	1945	13·28
1926-1935	15·04	1946	13·49
1931-1935	13·88	1947	13·88
1936-1940	14·55	1948	12·27

Causes of Death.—The number of causes of death are summarised in the following table :—

SUMMARY OF DEATH RATES PER MILLION FROM PRINCIPAL CAUSES.

General Diseases—	1946.	1947.	1948.
(*a*) Infectious	395	689	300
(*b*) Tuberculous—			
(1) Phthisis	1,102	1,066	1,142
(2) Others	225	224	135
(*c*) Malignant (Cancer, etc.)	1,767	1,841	1,877
Diseases of the Nervous System	1,514	1,526	1,473
Diseases of the Circulatory System	3,513	3,693	3.425
Diseases of Respiration	1,123	1,147	791
Congenital Defects and Malformations (including Premature Birth)	769	789	619
Violence	514	502	490
All Other Causes	2,568	2,402	2,018
All Causes	13,490	13,879	12,270

Causes of Death.—The number of deaths from certain of the principal groups of causes of death, especially among persons of older ages, have remained at approximately former levels. It is mainly the lower mortality from infectious diseases that has been responsible for the reduction in the general death rate. The death rate from infectious diseases of 300 per million of the population is less than half the mortality obtaining in 1947. Rates for individual causes in this group have reached very low levels. Mortality from diphtheria was only half that for the previous year. The same observation applies to whooping cough for the mortality (7 deaths) is a low record which has never hitherto been approached and the death rate, 6 per million of the population, compares with 70 in 1947. Scarlet fever has become so mild that there were only 3 deaths during the year, and measles, with a rate of 21 against 14, continues at what might be regarded as a minimum level. Influenza was also less deadly with a rate of 33 against 74 for the previous year and 149 in 1946.

For the first time there was no death from any of the diseases included under the heading "Typhoid (Enteric Fever) and Paratyphoid" which in the early years of the century were regarded with considerable apprehension because of the high fatality.

Mortality from diarrhoeal diseases among children under 2 years of age also reached a record low level, 225 against 522 during the previous year and 274, the previous low figure, which was registered in 1946.

These causes are dealt with in more detail in the next section of the Report.

Tuberculosis.—The pulmonary form of the disease is again responsible for heavy mortality, the rate being 1,142 compared with 1,066 for the previous year. Pulmonary tuberculosis has been one of the war problems because of the increasing number of cases notified. Inadequate housing accommodation has led to an increase in contact infection as segregation has been frequently impossible due to the lack of hospital bed accommodation. This aspect of the problem is dealt with more fully in a special report incorporated in Section IV (page 95).

The success of preventive efforts in reducing the mortality from this disease is more apparent when non-pulmonary tuberculosis is considered, for the rate recorded in 1948 was 135, whereas formerly it has never been lower than 200. In 1947 the rate was 224 and 225 in the year prior to the war.

Abdominal tuberculosis however, has been more fatal for there were 32 deaths, representing a rate of 29 per million of the population against 19 for the previous year and 14 in 1946. This increase is to a certain extent related to the higher birth rate of the past year or two. There can be no doubt that it is associated with the large number of pulmonary cases in small and overcrowded houses. It is unlikely that bovine infection has increased, for there have been fewer infected animals discovered in milch herds than in any previous year and practically all the city milk supply is now pasteurised. It would however, be interesting to speculate as to whether this increase may be partly due to mothers infecting their babies when breast feeding or by sputum in the process of teaching the baby to take other forms of food in view of the increasing numbers of pulmonary cases in the city.

Diseases of the Nervous System. The death rate for this group, 1,473, is the lowest since 1942 when the rate was 1,443. This is quite a favourable rate for intra-cranial vascular lesions form the greater number with 1,250 against 1,254 for the previous year. Mortality from other forms of nervous diseases shows a definite drop, 223 compared with 272 and 282, the rates for 1947 and 1946 respectively.

Diseases of the Circulatory System.—The rate for this group of disease is 3,425 compared with 3,693 in 1947. The previous lowest rate was 3,375 in 1945. The death rate from heart disease, 3,143, is about the average previous to the post-war increase. This is satisfactory in view of the aging of the population referred to at the beginning of this section for nearly three-fourths of the deaths take place among persons over 65 years of age.

The coloured diagram here introduced shows the increasing trend of the causes in the group of heart diseases since 1920. Male deaths have increased more definitely than the females, and the rate for those over 65 years of age is trebled whereas the population at those ages is barely double.

Diseases of Respiration.—Deaths from diseases included in this group are dealt with in detail in Section IV of the Report. Here it is only necessary to draw attention to the very considerable reduction in the rate, namely, 791 against 1,147. This figure does not include influenza which, as stated on previous page, also showed a marked reduction. Mildness of the winter months and coolness of the summer have probably been the greatest factors in the marked reduction recorded, for the rates are the lowest registered.

Premature Births and Congenital, etc., Defects.—The rate for these causes of death should more correctly be calculated on the number of births for the reduction is largely proportional to the drop in the number of births. There has however, been some improvement quite apart from this fact for the actual number of deaths is almost back to the low record of 638 in 1945 when there were nearly 2,000 fewer births. In this group the mortality rate for premature births is down to 332 against 392, while the death rate from congenital defect and malformation at 287 is down by more than 27 per cent.

Deaths from Violence.—The death rate from this cause shows little variation from year to year apart from the increase which took place during the black-out. The rate for 1948 was 490 against 502 for 1947.

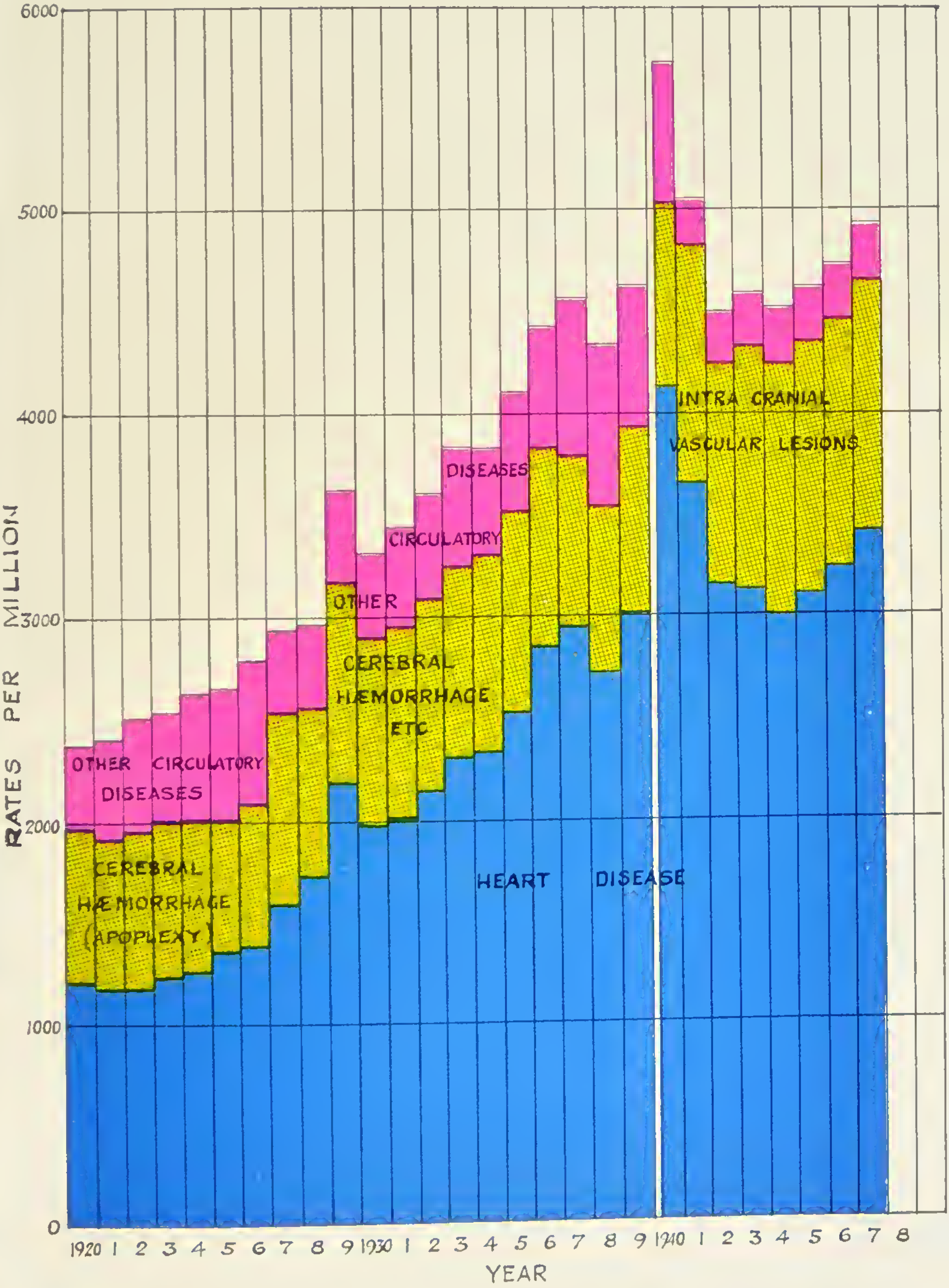
The following table gives the age and sex distribution of the deaths in order to bring out the steady toll of the lives of young children, especially among boys. There has been a decrease among males over 45 years of age but deaths among females of that age increased.

		Males.					Females.				
		−5	−15	−45	+45	Total	−5	−15	−45	+45	Total
1944	...	45	66	79	204	394	22	21	33	123	199
1945	...	37	67	77	179	360	25	19	24	125	193
1946	...	29	43	81	201	354	28	10	28	133	199
1947	...	47	39	91	187	364	21	13	24	130	188
1948	...	38	36	96	175	345	24	10	26	139	199

GLASGOW.

HEART DISEASE AND OTHER CIRCULATORY DISEASES.

DEATH RATES PER MILLION



AGE AND SEX DISTRIBUTION.

There were 7,226 male and 6,394 female deaths during the year compared with 8,074 and 7,192 respectively for the previous year.

As stated above, the mortality from the notifiable infectious diseases is so low that the small number of deaths scattered throughout the age periods is of little epidemiological interest. Almost all the mortality is among children, with females more numerous than the males.

There were 692 deaths of males from tuberculosis compared with 575 females, an excess of 20 per cent. The highest mortality among the males was 137 at ages 45-55 and among females, 180 between 25 and 35 years. Meningeal forms of the disease were the cause of 40 female deaths compared with 37 for males; abdominal tuberculosis mortality was also greater among the females in the proportion of 18 to 14.

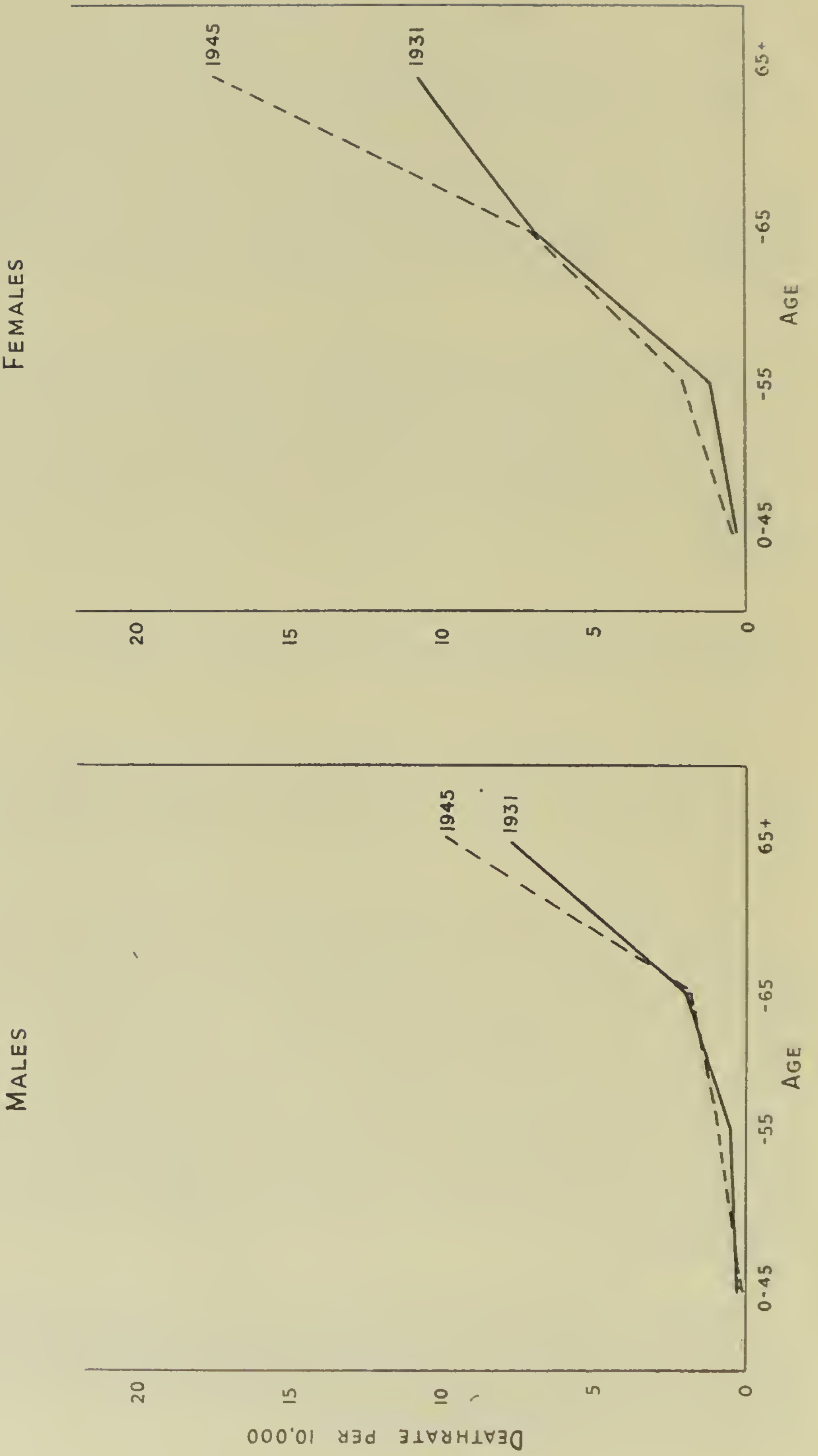
Of the 45 deaths from syphilis only 7 were females and all except 3 congenital cases occurred at ages over 25 years. Deaths were heaviest among males over 45 years old.

Deaths from diabetes were three-and-a-half times more numerous among females with 111 to 36. There were 3 male deaths at the age period 10-15 years. Almost all the deaths among females took place after the age of 55. Further reference is made to diabetes on page 121.

Heart disease alone forms more than 25 per cent. of the total deaths and coupled with other diseases of the circulatory system the percentage becomes 27. There were 8 deaths among boys of school age, 5-15 years, compared with 15 girls. A chart (not published) shows that the mortality among males has increased more rapidly at all the age periods above 45 years since 1921. The increase against both sexes has been quite marked among the old people over 65 years. The increase in the mortality among males between 45 and 55 years of age is relatively heavy and is probably associated with the present industrial drive, despite the shorter working week, and it may be the aftermath of war.

Respiratory diseases are dealt with in more detail in Section IV. One of the outstanding features of the mortality statistics of 1948 is the reduction in the number of deaths among young infants under 1 year of age compared with last year.

GLASGOW – DIABETES FOR YEARS 1931 AND 1945
DEATHRATES PER 10,000



DEATHS FROM PNEUMONIA UNDER 1 YEAR.

	1948.	1947.
Males	82	178
Females	58	101
Total	140	279

It will be seen that the number of deaths in this age group has been halved, whereas there is little reduction in the mortality for children between 1 and 15 years. The totals for all pneumonia deaths are 307 males and 186 females ; male deaths are also in excess for the other forms of respiratory diseases.

Appendicitis was the cause of 23 male deaths compared with 12 female deaths, the males exceeding the females at all age periods, while from other digestive diseases deaths of females exceeded the males in the proportion of 154 to 133, the higher mortality occurring at all ages from 45 years upwards. There was less disparity in the mortality from nephritis, 118 males to 104 females.

Cancer.—The increasing mortality from cancer was dealt with at some length in the Report for last year. The twin diagrams there inserted showed that deaths from the disease were increasing more rapidly among the males. This especially is the case for cancer of the respiratory organs and also for diseases of the intestines, rectum, etc.

Allowing for the increasing age constitution of the population however, for most of the deaths took place at ages above 65 years, there has been relatively little change in the total incidence among females. The increase in males would seem to be more accentuated from 1939. This increase may be associated with war work and later, the industrial drive for export.

The number of deaths from cancer during 1948 was 2,084, representing a death rate of 1,877 per million of the population compared with 1,841 for 1947. Both these rates are considerably above those for previous years.

The total number of male deaths was 1,101 compared with 1,088 in 1947. Reduction took place at the age period 45-55 (169 against 196). The female deaths numbered 983 in 1948 compared with 937 for the previous year, there being increases at all the age periods over 35 years.

GLASGOW, 1948.—DEATHS FROM CANCER IN THE DIFFERENT SITES AS GIVEN IN THE INTERNATIONAL LIST OF CAUSES OF DEATH.

SITE OF LESION.	MALES.									FEMALES.									BOTH SEXES.	Year 1947		
																				All Ages.		Both Sexes.
	−15	−25	−35	−45	−55	−65	−75	75+	Total.	−15	−25	−35	−45	−55	−65	−75	75+	Total.		Males.	Females.	
Buccal Cavity and Pharynx ...	—	—	—	1	2	7	27	17	54	—	—	—	2	2	4	2	3	13	67	62	11	73
Digestive Organs & Peritoneum—																						
(*a*) Oesophagus	—	—	—	2	3	9	28	9	51	—	—	—	—	1	8	9	7	25	76	49	25	74
(*b*) Stomach and Duodenum ...	—	—	4	22	35	57	76	30	224	—	—	1	6	17	42	65	53	184	408	233	178	411
(*c*) Rectum	—	—	4	5	8	19	36	18	90	—	—	2	5	10	7	19	13	56	146	98	56	154
(*d*) Liver and Biliary Passages	—	—	1	3	4	12	7	9	36	—	—	1	—	4	5	16	11	37	73	33	38	71
(*e*) Pancreas	—	—	—	2	6	6	6	10	30	—	—	—	—	3	6	12	8	29	59	31	23	54
(*f*) Peritoneum	—	—	—	—	—	—	2	—	2	—	—	—	—	1	—	2	1	4	6	5	3	8
(*g*) Other Digestive Organs ...	—	2	2	5	15	38	49	40	151	—	—	1	6	18	34	53	42	154	305	130	157	287
Respiratory Organs	—	—	2	17	80	98	50	11	258	—	—	2	5	18	19	24	6	74	332	269	51	320
Uterus	—	—	—	—	—	—	—	—	—	—	—	2	15	25	31	19	15	107	107	—	111	111
Other Female Genital Organs ...	—	—	—	—	—	—	—	—	—	—	—	1	13	16	10	13	5	58	58		49	49
Breast	—	—	—	—	—	—	—	—	—	—	—	3	13	31	39	34	23	143	143	2	139	141
Male Genito-Urinary Organs ...	—	—	1	1	3	13	35	27	80	—	—	—	—	—	—	—	—	—	80	72	—	72
Skin	—	—	—	1	1	1	5	5	13	—	—	—	1	1	2	2	4	10	23	11	10	21
Other or Unspecified Organs ...	—	2	1	8	12	29	46	14	112	4	—	—	5	17	25	23	15	89	201	93	86	179
Totals	—	4	15	67	169	289	367	190	1,101	4	—	13	71	164	232	293	206	983	2,084	1,088	937	2,025

Deaths from cancer of the buccal cavity in males show a slight tendency towards reduction, the number occurring during 1948 being 54 compared with 62 for the previous year ; mortality among females is maintained at 13, which is about the average of recent years. In pre-war years the ratio of male deaths to female was seven to one. The proportion is now five to one.

Compared with the previous year there is practically no change in the mortality from cancer of the digestive system. The total for males was 584 and for females 489, compared with the respective figures of 579 and 480. These numbers form about fifty per cent. of the total deaths from cancer for each sex. Disease of the stomach, the heaviest cause in this group, is more fatal among males at all age periods generally.

Cancer of the respiratory organs again shows an increase, 332 for both sexes, compared with 320, male deaths being 11 fewer at 258 but the female mortality was considerably higher, 74 against 51 for the previous year. This increase occurs mostly at older ages, especially females over 65 years.

Deaths classified as due to disease of the female generative system retain their heavy toll. Cancer of the breast during the reproductive ages of women, 25-45 shows a definite increase, 16 deaths compared with 7 for the previous year, while the deaths from disease of the female genital organs other than uterus are up from 6 to 14.

Cancer of the skin was again more fatal among males, 13 deaths compared with 11 for 1947.

Transfer Deaths, etc.—Deaths occurring in the city and transferred to other authorities numbered 1,647, and inward transfers 1,629, compared with the respective figures of 1,746 and 599 for the previous years.

The deaths occurring in hospitals, nursing homes, and other institutions compared with the respective figures for the preceding year were as follows :—

	1947.	1948.
Local Authority General Hospitals and Poorhouses	3,022	2,668
Local Authority Fever Hospitals and Sanatoria	1,334	1,005
Local Authority Mental Hospitals	312	277
Voluntary Hospitals and Infirmaries	2,166	2,023
Nursing Homes, etc.	241	267
Totals	7,075	6,240
Percentage of all Deaths	46·33	45·82

SECTION III

MATERNITY AND CHILD WELFARE.

The year 1948 marks the end of an era in Public Health. The Local Authorities have lost the hospitals and much of their tuberculosis and venereal disease services. On the other hand, they have been given added responsibilities, particularly in the field of maternity and child welfare. On 5th July it became, *inter alia*, the duty of every Local Health Authority to have schemes of maternal and child care, a service of health visitors and of home nurses. To make mandatory in the Health Act what was before only permissive is a recognition of the value of the Local Authority Maternity and Child Welfare Service.

From certain points of view, no great changes in the service became immediately obvious because the effect of the changed administration has yet to be felt. The real testing time will come later. The Local Health Authority is carrying on as before and has, in fact, been acting for several purposes as an unofficial agent for the Regional Hospital Board. This is particularly so with regard to the ante-natal clinics. There has been a slight reduction in the clinic attendances in certain areas of the city owing to an increase in the number of cases who attended a general practitioner for home confinement, but the majority of patients who wished hospital confinement still attended the child welfare ante-natal clinics. In the past, these clinics have played an enormously important part in maternal welfare and in the reduction of maternal mortality and morbidity, and have been responsible for the major portion of ante-natal care, at any rate in Glasgow. Their influence on the mothers has been profound. The part they will play in the future will largely depend on their medical staffing. However experienced and keen the health visitors and midwives may be, the attitude and interest of the medical officer at the clinic is very important. I am convinced that the full-time child welfare medical officer should not be replaced entirely by the specialist or the general practitioner. She has still a vital contribution to make to the service.

Comment must be made on the Domiciliary Midwifery Service, in which there have been considerable expansion and adjustment since 5th July. In terms of Section 23 of the National Health Service Act, the Local Health Authority must provide a midwifery service for domiciliary confinements. The service is free. The effect of this provision was to bring to an end the practices of many of the independent midwives. Consequently, 29 of these midwives were appointed by the Corporation to the full-time staff of municipal midwives. Four others, too old for full-time appointments, are continuing in private practice and are paid on a case basis by the Corporation. The staff of full-time midwives is now approximately 100.

Another feature of the service has been the extension during the latter half of 1948 of the training scheme for pupil midwives to include pupil midwives from the Royal Maternity Hospital. The outdoor practice of this hospital diminished rapidly after 5th July and it has been necessary to have a co-ordinated training scheme for the city. Three additional assistant supervisors were appointed to enable this training scheme to be efficiently administered.

The tripartite control of the Maternity Services has resulted in certain administrative difficulties. To ensure a smoothly running service, the integration of the three aspects has brought extra work to the Midwifery Department and has meant the most vigilant attention to detail by all members of the staff.

Reference must be made again to the Home Help Service. A further expansion in the service took place in the latter months of 1948 and by the end of the year about 650 helps were in employment. This service is one of the most satisfactory and rewarding of the family welfare services.

The Health Service Act laid the responsibility on the Local Health Authority of providing a home nursing service. This is an entirely new provision for a Local Health Authority. The Corporation decided against the taking over of the local Queen's Nurses' Association, but to co-operate with that body a joint committee has been set up with the Medical Officer of Health as the Chief Executive Officer. No difficulties have been experienced in this joint administration and the service is running smoothly and efficiently. A certain expansion in the number of nurses took place in the latter months of the year and it is hoped that within the near future an additional number of recruits will be forthcoming.

Comment must be made on the record low infant mortality rate of 56. This low figure is due mainly to the fact that there was no widespread incidence of gastro-enteritis as there was in 1947. It is satisfactory to note that the death-rates from congenital malformation and from prematurity are also reduced. Intensive propaganda with regard to gastro-enteritis and its prevention was carried out during the summer months by health visitors, sanitary inspectors, and by public notices in trams and cinemas, as well as by Press publicity.

Mention must again be made of the great amount of health education carried out by the child welfare medical officers and the health visitors. The staff spoke at about 300 meetings and co-operated with various organisations such as the Girls' Training Corps, Girl Guides, British Red Cross Association, in schemes of training for child care.

INFANT MORTALITY.

During the year there were 733 male infant deaths in the first year of life or 10 per cent. of the total male deaths ; the respective figures for female deaths were 508 and 8 per cent. The total infant deaths, 1,241, corrected for inward and outward transfers, compared with 1,989 for the previous year, thus showing a reduction of 748. As births during the year numbered 22,292, the infant mortality rate per 1,000 births was 56. For the previous year the rate was 77.

This is the lowest rate recorded for the city and is only half the rate for 1941. The following summary gives a comparison of the infant mortality rates during the past ten years.

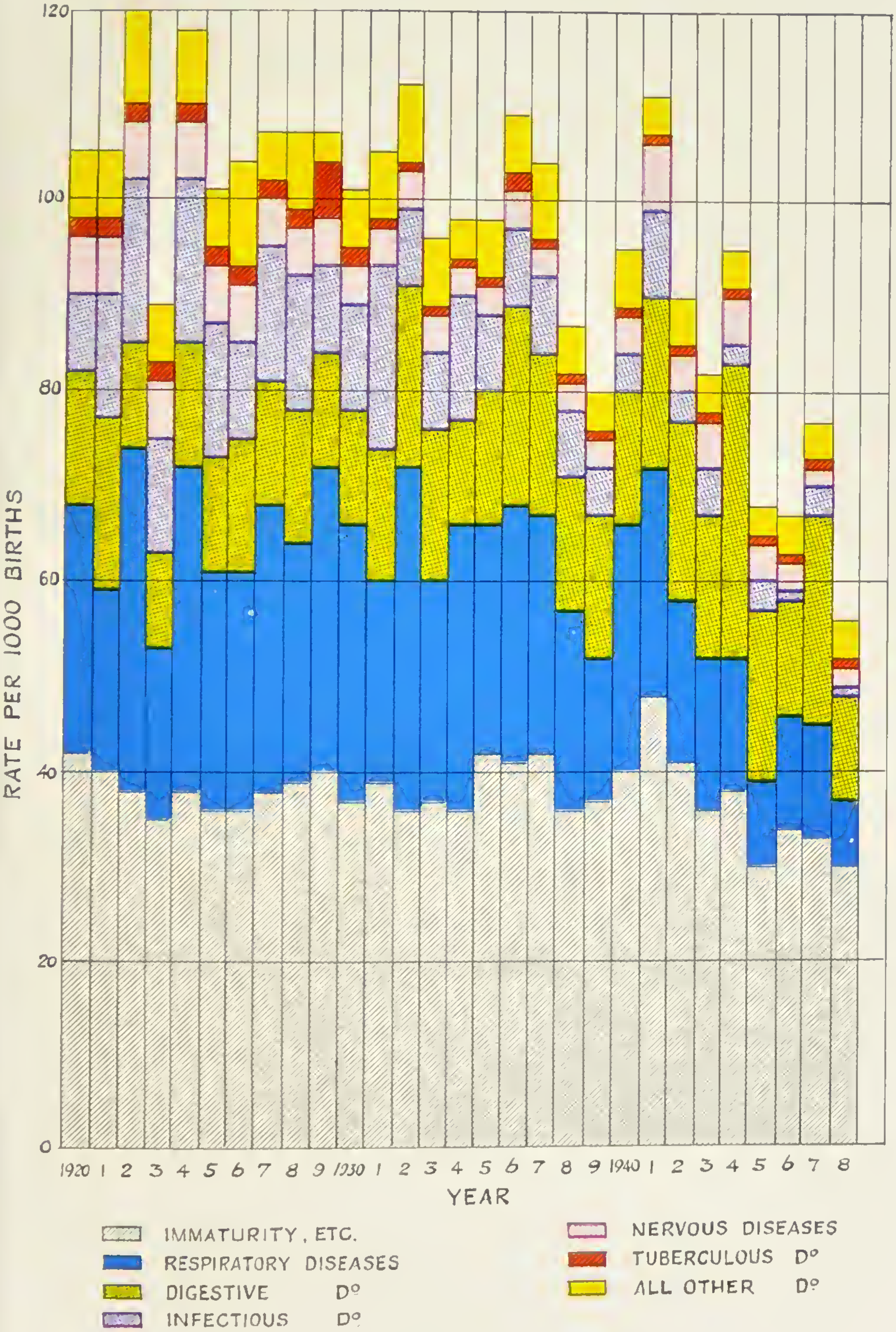
1939	80	1944	95
1940	95	1945	68
1941	111	1946	67
1942	90	1947	77
1943	82	1948	56

This favourable return for a large industrial city is very satisfactory when one considers that quite apart from the problems such as housing and social services, the war and its aftermath has added to the difficulties of feeding and clothing.

The reduction of infant mortality has been general throughout the country. The extension of ante-natal clinics and the provision of a considerable number of hospital beds for primiparae, and especially for cases in which complications may arise have been instrumental in further reducing infant mortality and influencing the reduction of maternal deaths which is referred to later on in this section.

GLASGOW

INFANT MORTALITY ACCORDING TO CAUSE
1920 - 1948.
RATE PER 1000 BIRTHS.



Details of the causes of male and female deaths for each quarter during the first year of life are given in Appendix Table XII. The information there given is summarised in the following statements which show the relative magnitude of the principal causes of death, compared with those for the intervening years since 1911.

MALES—

	Causes of Death	1911-20	1921-30	1931-35	1936-40	1941-45	1946	1947	1948
		Rate per 1,000 Births.							
I.	Immaturity	46	41	43	44	42	39	35	33
II.	Diseases of Respiratory System	29	32	30	25	18	14	14	8
III.	Diseases of Digestive System	20	15	17	19	24	14	28	14
IV.	Diseases of Nervous System	9	7	4	4	5	4	3	3
V.	Tuberculous Diseases ...	5	2	1	1	1	1	1	1
VI.	Infectious Diseases ...	15	14	12	6	4	2	2	—
VII.	Suffocation	1	—	—	—	—	—	1	1
VIII.	All other causes ...	11	8	7	6	5	2	3	3
	All causes ...	136	119	114	105	99	76	87	63

FEMALES—

	Causes of Death	1911-20	1921-30	1931-35	1936-40	1941-45	1946	1947	1948
		Rate per 1,000 Births.							
I.	Immaturity	36	33	33	35	34	29	30	26
II.	Diseases of Respiratory System	23	23	23	21	14	10	9	6
III.	Diseases of Digestive System	16	11	12	13	16	11	18	9
IV.	Diseases of Nervous System	7	4	3	3	4	3	2	1
V.	Tuberculous Diseases ...	3	2	1	1	1	1	1	1
VI.	Infectious Diseases ...	15	13	11	6	4	1	3	1
VII.	Suffocation	1	1	—	—	—	—	1	1
VIII.	All other causes ...	8	7	5	4	3	3	3	2
	All causes ...	109	94	88	83	76	58	67	47
	Ratio—Males to 100 Females ...	124	128	131	126	130	131	130	134

Causes of death from the immaturity group of diseases, now lower by about 40 per cent. for male infants and 50 per cent. for females since the early years of the present century, show a further improvement for both sexes. The rates per thousand births for males, 33, and for females, 26, compare with the respective figures of 35 and 30 for the previous year. There have been some considerable changes in the subheadings in this group and these are here summarised from the Appendix Table :—

	Male.		Female.	
	1948.	1947.	1948.	1947.
Congenital Malformations ...	60	93	59	72
Congenital Debility ...	13	40	14	30
Premature Birth	223	231	146	200
Injury at Birth	36	36	20	29
Atelectasis	32	38	26	34
Others	23	27	15	15

The outstanding features of this summary are (1) the considerable drop in the deaths from congenital malformation, especially among the males, (2) the large reduction in the mortality of females from premature births.

The weather conditions during 1948 were favourable to child life and the two great causes of infant mortality show corresponding remarkable reductions. The death rate from diseases of the respiratory system was only 8 for males and 6 for females, compared with 14 and 9 respectively for the previous year. These rates are little more than 25 per cent. of those for years previous to the last world war. Some part of the reduction is due to the treatment in hospital of the more seriously ill young children and the present-day application of biochemical therapy. By far the greatest reductions, however, have taken place in the first month of life.

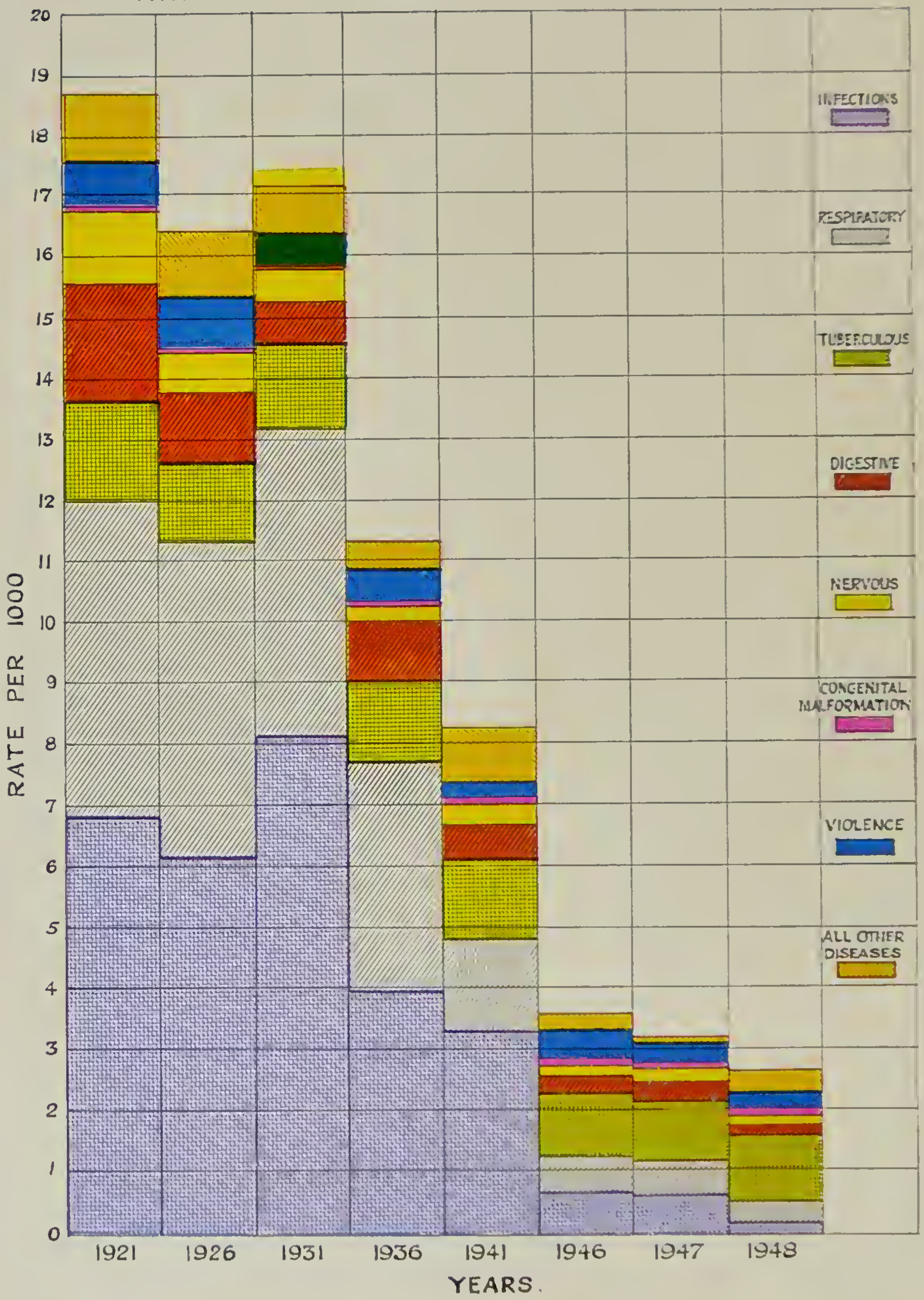
The marked reduction in the infant mortality rate for this year is due to the fact that there was no outbreak of gastro-enteritis. The mortality from diseases of the digestive system is only half the high rates of 1947, namely, 14 for males and 9 for females. Here the greatest reductions have taken place in the later months, especially during the age period 6-9 months. For males the number of deaths during those three months was 20 compared with 77 and for females, 15 against 45, for diarrhoea alone.

Deaths from diseases of the nervous system have been fewer, especially for females (14 compared with 28 in 1947) and this is also the case with regard to tubercular infections although numbers are now so small that the reduction is not reflected in the death rates. Deaths from the various infectious diseases have come down to practically minimum figures. The highest was for measles, with a total of 8, 7 of whom were females; there were only three deaths from whooping cough and 5 from cerebro-spinal fever.

Infant Mortality in Municipal Wards.—This is the first year on record that not one municipal ward has an infant mortality rate of 100 or more. This information is given in Appendix Table XI which shows that the highest rate was 83 in Kingston Ward (compared with 97 for the previous year), followed by 73 for the altered area of Knightswood Ward which is largely composed of Knightswood Housing Scheme, now that part of the former area is incorporated in the new ward of

GLASGOW

DEATH RATE OF CHILDREN AGED 1 TO 5 YEARS FROM VARIOUS CAUSES IN CERTAIN YEARS 1921 TO 1948.



Yoker. Rates of 70 are recorded in Cowcaddens and Gorbals and 71 in Govan. Considerable reductions have taken place in Calton, 53 (111); Provan, 64 (98); Springburn, 66 (106); Townhead, 54 (92); Exchange, 50 (87); Partick East, 36 (77). Rates for the previous year are given in parenthesis.

The lowest rates were 19 in Langside, compared with 34 for 1947; Cathcart, 20 against 33, and Kelvinside, 28 against 62.

Mortality among Toddlers.—When the campaign for the reduction of infant mortality was in course of development in the early years of the century, certain schools of thought were of opinion that the saving of infants would result in higher mortality in the following years of life. This has not been the case, for the death rate among young children between one and five years of age shows a much greater proportionate reduction than that of the infant mortality as shown in the following table.

Year	*Infant Mortality Rate per* 1,000 *Births*	*Deaths* 1-5 *Years: Actual Number*	*Rate per* 1,000 *Population at Ages* 1-5 *Years*
1900	153	2,754	39·2
1911	139	1,862	26·7
1921	106	1,494	19·2
1931	105	1,341	17·2
1938	87	753	9·8
1943	82	394	5·3
1946	67	276	3·6
1947	77	296	3·7
1948	56	219	2·7

The reduction that has been effected is illustrated in the diagram on the page opposite together with the principal causes of deaths at these ages. The mortality was almost halved in the first twenty years of the century and it is now only 15 per cent. of what it was in 1921; in other words, the number of deaths occurring at the present day is less than one-fifteenth of those which would have occurred had the conditions remained the same as in 1900.

Most of this improvement has resulted from the reduction in the number of deaths due to infectious diseases. In the early years of the century measles, whooping cough and pneumonia were the causes of very heavy mortality.

Illegitimate Mortality.—There were 103 infant deaths among the 1,265 illegitimate births, which is equivalent to an infant mortality rate of 81. The corresponding rate for the preceding year was 103.

Notification of Still Births.—The number of still births registered in the city during the year was 809 compared with 973 for the preceding year. There were 121 outward and 47 inward transfer still births, so that the net total for the city was 735 against 886. The rate 3·21 per cent. of the total births is the same as the rate for 1947.

From information obtained regarding still births reported under the Notification of Births Acts, it is found that 12·7 per cent. of all births attended at home by doctors were still births, and of those medically attended in institutions 4·2 per cent. Together the rate indicated is 3·9. Among non-medically attended births the corresponding rate was 1·6. Detailed statistics are given in Appendix Tables XIII and XIV.

CHILD WELFARE SCHEME.

With the coming into operation of the National Health Service the former Outdoor Medical Service Clinics became available for other purposes. In the Bridgeton district most of the accommodation in the clinic in Redan Street is now devoted to child welfare purposes while the remainder has been adapted for Education Health Service dental work. Orr Street Clinic is now retained for ante-natal cases.

The air raid precautions hut in Fauldhouse Street, Polmadie, was converted for child welfare work in order to relieve the pressure on Gorbals Clinic in Florence Street, the accommodation in which has been overtaxed for a long time. A temporary structure in Bengal Street will provide better accommodation in place of the inadequate and unsuitable premises now occupied in Harriet Street. Some similar facilities will be provided in Knightswood and it will be necessary to erect clinics in some of the outlying districts following the development of new housing schemes.

There are now 21 centres throughout the city, 11 of which are situated in premises specially constructed for the purpose, while 7 more are held in suitable accommodation in administrative buildings, etc. The total number of sessions is now 116, which includes 44 ante-natal clinics, 67 child welfare sessions and 5 ultra violet ray treatment. In addition, ante-natal and child welfare clinics still continue at the Royal Maternity Hospital.

The time table of the clinics as now organised is given on the opposite page.

LIST OF MATERNITY AND CHILD WELFARE CLINICS.

	9 a.m.	1.30 p.m.
IONDAY.	33 Richard Street (Ante-Natal). Sandy Road, Partick (—1 year). 15 Glenbarr Street, Provan. 194 Fernbank Street (Ante-Natal). Redan Street. 150 Wellshot Road (Ante-Natal). 26 Florence Street. 26 Florence Street (Ante-Natal). 2 Summertown Road (Ante-Natal). 20 Arklet Road (Ante-Natal).	33 Richard Street. Sandy Road, Partick (Ante-Natal). 101 Denmark Street. 15 Glenbarr Street, Provan (Ante-Natal) 60 Avenuepark Street. 614 Dobbie's Loan (Ante-Natal). 194 Fernbank Street. 15 Glenbarr Street (Ultra-Violet Ray). 106 Orr Street (Ante-Natal). 150 Wellshot Road, Shettelston. 46 Balvicar Street. 26 Florence Street. 2 Summertown Road (Ultra-Violet Ray). 20 Arklet Road. Craigmuir Road, Penilee (Ante-Natal).
UESDAY.	Royal Hospital Sick Children. 18 Plean Street, Blawarthill. 194 Fernbank Street, Springburn. 60 Avenuepark Street (Ante-Natal). 15 Glenbarr Street, Provan. 614 Dobbie's Loan. 150 Wellshot Road, Shettleston. 106 Orr Street (Ante-Natal). 26 Florence Street. 132 Weir Street. 20 Arklet Road (Ante-Natal). 2 Summertown Road, Govan.	33 Richard Street (Ante-Natal). Sandy Road, Partick (—1 year). 614 Dobbie's Loan (Ante-Natal). 101 Denmark Street. Redan Street. 150 Wellshot Road. 150 Wellshot Road (Ante-Natal). 33 Harriet Street. 26 Florence Street (Ante-Natal). 26 Florence Street. 20 Arklet Road (Ante-Natal).
VEDNESDAY.	33 Richard Street (—1 year). 18 Plean Street. 60 Avenuepark Street. 614 Dobbie's Loan. 15 Glenbarr Street. 106 Orr Street (Ante-Natal). 150 Wellshot Road. Fauldhouse Street (Ante-Natal). 2 Summertown Road (Ultra-Violet Ray). Craigmuir Road, Penilee (Ante-Natal).	18 Plean Street (Ante-Natal). 194 Fernbank Street, Springburn (Ante-Natal). Redan Street. 150 Wellshot Street, Shettleston. 26 Florence Street (Ante-Natal). 33 Harriet Street. 2 Summertown Road. Craigmuir Road, Penilee. 20 Arklet Road.
HURSDAY.	112 Ingram Street. Sandy Road, Partick (Ante-Natal). 33 Richard Street. 614 Dobbie's Loan. 15 Glenbarr Street (Ante-Natal). 194 Fernbank Street. Redan Street. 46 Balvicar Street. Fauldhouse Street. Craigmuir Road, Penilee. 132 Weir Street. 2 Summertown Road (Ante-Natal).	Sandy Road, Partick (1-5 years). 60 Avenuepark Street (Ante-Natal). 614 Dobbie's Loan. 101 Denmark Street (Ante-Natal). 15 Glenbarr Street (Ultra Violet Ray). 106 Orr Street (Ante-Natal). 150 Wellshot Road (Ante-Natal). 26 Florence Street. 26 Florence Street (Ante-Natal). 46 Balvicar Street (Ante-Natal). 20 Arklet Road. 132 Weir Street. 2 Summertown Road (Ante-Natal).
RIDAY.	18 Plean Street. 33 Richard Street. 614 Dobbie's Loan (Ante-Natal). 60 Avenuepark Street. 15 Glenbarr Street. 101 Denmark Street (Ante-Natal). 106 Orr Street (Ante-Natal). 150 Wellshot Road (Ante-Natal). 26 Florence Street. 2 Summertown Road.	Royal Hospital Sick Children. 18 Plean Street (Ante-Natal). 614 Dobbie's Loan. 15 Glenbarr Street. 101 Denmark Street. Redan Street. 150 Wellshot Road. 26 Florence Street (Ante-Natal). 33 Harriet Street (Ante-Natal). 2 Summertown Road (Ultra-Violet Ray). 20 Arklet Road. Craigmuir Road, Penilee.

aternity Hospital Ante-Natal Clinics.—Monday to Friday at 1.30 p.m., Saturday 9.30 a.m.
aternity Hospital—1 Year Clinics.—Monday, Wednesday and Friday 9 a.m.
accination is also done at 20 Cochrane Street on Tuesdays at 12 noon.

The number of consultations held during 1948 was 3,389 compared with 3,272 for the preceding year and the total number of attendances at these consultations was 145,247, compared with 157,926 during 1947. The number of infants under one year attending for the first time was 10,221, compared with 12,104 for the preceding year, while the corresponding figures for subsequent attendances were 105,124 and 117,904. The number of children over one year attending for the first time was 983, compared with 1,123, and the subsequent attendances numbered 28,919, against 26,795.

The following table gives the attendances at each consultation centre during 1948, with the corresponding total figures for the previous year:—

ATTENDANCES AT INFANT CONSULTATIONS, 1948.

	No. of Consultations held.	Children—1 year. No. of Attendances.		Children+1 year. No. of Attendances.		Total No. of Attendances.		1947—Total No. of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Central—									
Cochrane Street	52	90	583	31	415	121	998	115	1,144
Richard Street	207	443	4,530	81	1,151	524	5,681	636	7,412
Partick ...	151	437	4,212	41	1,282	478	5,494	587	6,326
Blawarthill ...	156	605	4,787	62	787	667	5,574	687	5,265
Royal Hospital for Sick Children ...	101	138	2,056	20	360	158	2,416	27	242
North—									
Provan ...	252	638	5,303	102	1,587	740	6,890	881	7,708
Springburn ...	151	422	5,417	25	1,077	447	6,494	501	6,430
Denmark Street	148	400	4,919	16	563	416	5,482	486	6,079
Cowcaddens ...	257	532	6,006	77	2,765	609	8,771	699	8,492
Maryhill ...	151	521	4,961	48	1,269	569	6,230	724	6,334
East—									
Redan Street	252	1,404	11,651	96	2,452	1,500	14,103	1,839	17,289
Shettleston ...	304	1,023	12,171	62	3,598	1,085	15,769	1,393	16,710
South-East—									
Gorbals ...	319	1,055	10,998	125	2,315	1,180	13,313	1,752	18,577
Pollokshaws ...	104	269	2,704	21	730	290	3,434	423	4,112
Balvicar Street	99	261	3,222	32	1,060	293	4,282	213	2,227
Oatlands ...	35	164	1,653	9	329	173	1,982	—	—
South-West									
Weir Street ...	156	333	4,145	27	1,412	360	5,557	479	6,583
Govan... ...	156	490	4,267	45	1,713	535	5,980	596	6,405
Elder Park ...	198	686	7,745	25	2,996	711	10,741	784	11,618
Penilee ...	140	310	3,794	38	1,058	348	4,852	405	5,746
	3,389	10,221	105,124	983	28,919	11,204	134,043	13,227	144,699

Supply of Dried Milk, etc.—The total number of packets supplied free was 587, representing a cost of £57 14s. 9d.

Where family income was above the scale of necessity, 48,067 packets were supplied at cost price to mothers and children.

Dietary supplements as shown below were also issued from the Centres :—

	Lbs.	Cost.
Cod Liver Oil	£2,429	396
Cod Liver Oil Emulsion ...	4,512	266
Chemical Food	3,864	263
Sundry Foods	124	12
	10,929	£937

The booklet " Health of Mother and Child " continued in demand at the Centres, and 6,868 copies were sold during the year. Large numbers were supplied to other Local Authorities in England and Scotland by special arrangement.

Ante-Natal Consultations.—Sessions at ante-natal clinics numbered 2,198, compared with 2,035 for the preceding year. The total attendances were 79,278, compared with 90,594 in 1947 ; primary attendances were 10,694, or 2,058 less than in the previous year (1947) ; subsequent attendances numbered 68,584, a decrease of 9,258. Consultations and attendances at each of the Centres are shown in the following table :—

ATTENDANCES AT ANTE-NATAL CLINICS, 1948.

	No. of Clinical Sessions.	Number of Attendances.		
		Primary.	Subsequent.	Total.
Richard Street ...	99	565	3,139	3,704
Partick	99	481	2,997	3,478
Blawarthill ...	101	502	3,570	4,072
Provan	200	665	4,082	4,747
Springburn ...	99	426	2,782	3,208
Denmark Street ...	104	391	2,383	2,774
Cowcaddens ...	151	552	3,138	3,690
Maryhill	104	550	3,423	3,973
Orr Street ...	255	1,509	11,137	12,646
Shettleston ...	203	1,067	7,144	8,211
Gorbals	252	1,327	8,984	10,311
Oatlands	35	134	984	1,118
Pollokshaws ...	50	260	1,349	1,609
Balvicar Street ...	32	99	801	900
Govan	151	1,066	6,058	7,124
Elderpark	151	142	4,899	5,741
Penilee	92	258	1,714	1,972
	2,198	10,694	68,584	79,278

In addition to the above, ante-natal consultations were carried on at the four municipal hospital out-patients departments, namely, Stobhill Hospital, Southern General Hospital, Eastern District Hospital, and Western District Hospital. The new cases registered at these consultations during 1948 numbered 1,994, and they made 7,064 attendances. The corresponding figures were 3,449 and 15,059 in 1947 respectively.

Among the 11,733 patients whose pregnancy terminated in 1948 (excluding abortions) 19 deaths occurred, giving a death rate of 1·6 per thousand births compared with 2·6 for the year 1947. There were only 2 deaths from puerperal septicaemia. Deaths among the other 17 patients were as follows :—

Haemorrhage of Pregnancy	2
Haemorrhage of Childbirth and the Puerperium	2
Other Accidents of Childbirth	5
Heart Disease	5
Respiratory Disease	1
Congenital Malformations	1
All Other Causes	1

Excluding the 8 deaths which had little association with the puerperal state, the maternal death rate of mothers attending the clinics was 0·94 compared with 1·56 for the city as a whole.

The total number of cases attending the ante-natal dispensary of the Maternity Hospital for the first time was 3,421 compared with 3,792 in 1947, and the total attendance, 19,563 as against 20,370. Of the 2,332 cases treated to a termination in delivery, 485 were treated in their own homes. Cases treated in the ante-natal wards numbered 4,367.

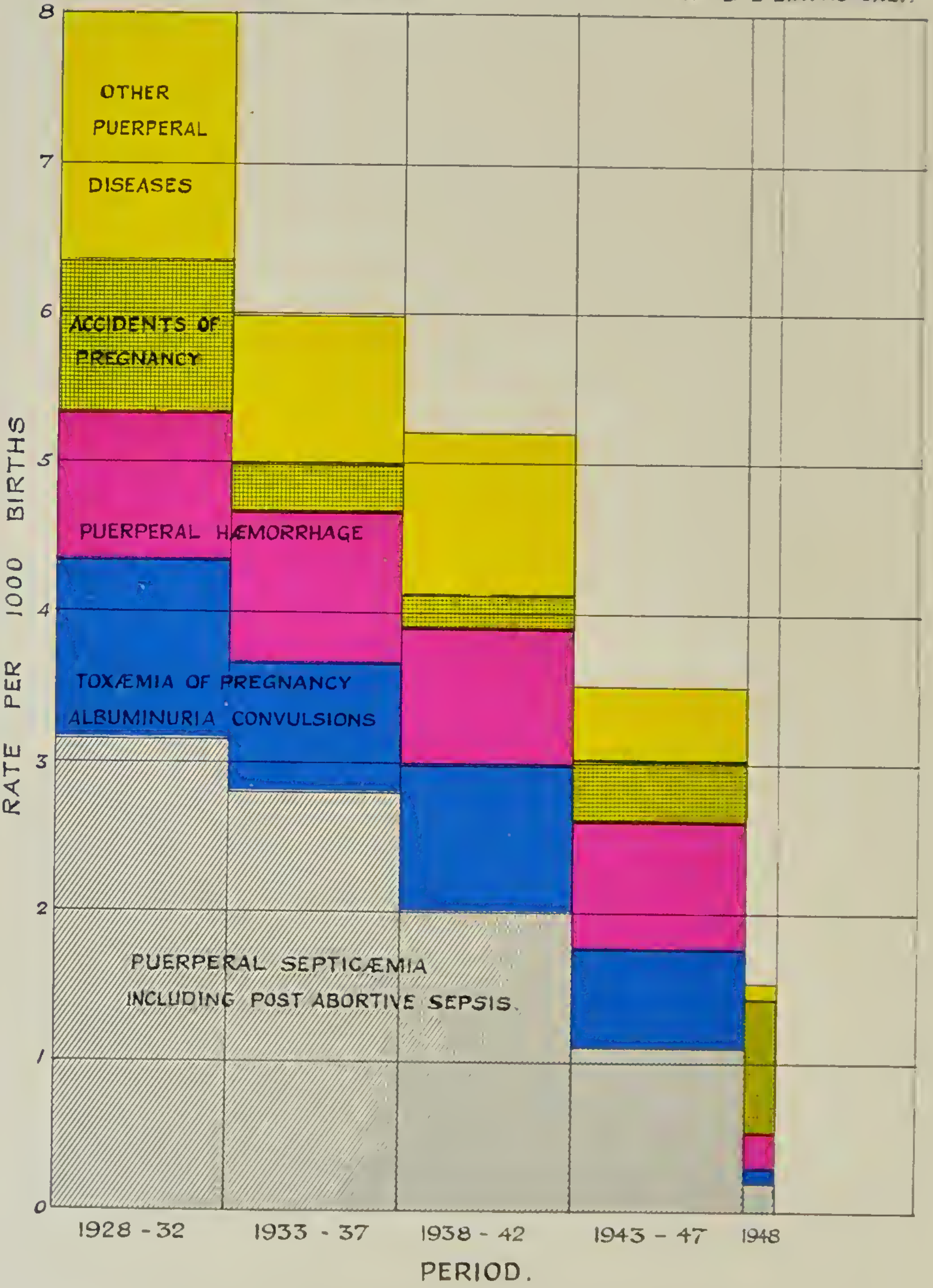
At the infant consultations held at the hospital there were 3,586 attendances as compared with 2,877 in 1947.

MATERNAL MORTALITY.

In the early years of the century when the Midwives (Scotland) Act, 1907, came into operation special enquiries began to be made into all deaths of women within a month or two of childbirth. It then became evident that many of these deaths were being certified as due to causes which did not indicate the association with maternal conditions. Following special investigation into these deaths the maternal mortality rate per 1,000 births was ultimately increased to 8·79.

GLASGOW: MATERNAL MORTALITY IN QUINQUENNIAL PERIODS AND IN YEAR 1948

RATES FOR FIRST QUINQUENNIA ARE CALCULATED ON LIVE BIRTHS ONLY.



Measures taken to reduce the number of those deaths by ante-natal care and educational measures associated with the improvement in environmental conditions were instrumental, along with the socio-economic improvement of the working classes, in reducing the mortality by half when the second world war began. This reduction, however, was still unsatisfactory, especially when compared with the rate for the rest of the country. In 1943 it was 5·19 compared with 3·7 for Scotland as a whole.

Since then there has been a rapid improvement and the rate for 1948, 1·56 compared with 2.32 for the previous year is now practically the same as the mortality throughout Scotland. This definite decline may to some extent be ascribed to the reasons already mentioned in dealing with infant mortality but it is probable that the provision of a considerable additional number of beds in hospital for first births and for other cases referred from ante-natal clinics has helped considerably in this improvement.

For a considerable period prior to 1944 the rate remained refractory around 5 but about 1930 the mortality in some areas approached the high level of almost 9 per 1,000 births.

In order to illustrate the improvement that has been effected during the past twenty years the following chart has been prepared in quinquennial periods, to avoid confusion in following the reductions in the various causes included in the maternal death rate.

The average rate for the quinquennium 1928-32 was 8·0 per 1,000 births, the death rate from puerperal septicaemia alone being 3·15. The reduction in fatal septicaemia during the twenty years has been very marked, the decrease being accelerated in recent years with the introduction of treatment by penicillin. Proportionate reductions have also taken place in the other causes within the group, namely, toxaemia of pregnancy, puerperal haemorrhage and other puerperal diseases. Fatal accidents of pregnancy, however, were more numerous in 1948, there being 21 deaths against 18 during the previous year and 15 in 1946. In recent years previous to 1946 the number was about 6 to 7 annually.

In other words—if the maternal mortality of 20 years ago of 8·79 deaths per 1000 mothers had obtained in 1948 the number of deaths of women in childbirth would have been 207 instead of 36.

Statement showing Maternal Deaths and Rates per 1,000 Births in Glasgow and Scotland in the Years 1944-1948.

	Deaths.					Rate per 1,000 Births.				
	1944.	1945.	1946.	1947.	1948.	1944.	1945.	1946.	1947.	1948
Accidents of Pregnancy ...	6	6	15	18	21	0·26	0·28	0·61	0·67	0·91
Puerperal Haemorrhage	13	11	21	21	6	0·56	0·52	0·86	0·79	0·26
Puerperal Septicaemia, including Post-abortive Sepsis	38	24	15	9	4	1·56	1·14	0·61	0·34	0·17
Toxaemia of Pregnancy, Albuminuria Convulsions	20	14	12	12	2	0·87	0·67	0·49	0·45	0·0
Other Puerperal Diseases	15	18	6	2	3	0·65	0·86	0·25	0·07	0·13
Totals— Glasgow ...	92	73	69	62	36	3·99	3·47	2·82	2·32	1·56
Scotland ...	294	249	237	235	160	3·0	2·8	2·2	2·0	1·5

Dental Treatment of Expectant Mothers.—The scheme approved by the Corporation in 1935 to provide dental treatment for necessitous and partly necessitous mothers was continued until 5th July, 1948. After this date under the National Health Service (Scotland) Act, 1947, treatment was provided on application, free of cost, irrespective of income.

Attendances totalled 4,899, of which 915 were first attendances. Extractions numbered 7,045 and 1,019 dentures were completed. Scalings, fillings, dressings and other work necessitated 1,441 attendances of patients.

ULTRA-VIOLET RAY CLINICS.

No alteration has taken place in the arrangements for light treatment of children suffering from rickets, malnutrition, etc.

The installation and the results of treatment have been fully dealt with in previous reports, so that only the records of numbers treated are here given in respect of 1948 :—

Record of Attendances and Consultations during 1948.

	Number of Clinics held.	Children —1 year. Number of Attendances.		Children +1 year. Number of Attendances.		Mothers. Number of Attendances.		Total. Number of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Provan ...	100	15	120	291	5,485	1	19	307	5,624
Govan ...	148	71	726	366	9,858	2	1	439	10,585
	248	86	846	657	15,343	3	20	746	16,209

INFANT VISITATON.

Under the scheme of infant visitation every birth is visited if the notification does not state that a medical practitioner has been in attendance, and the following table shows the record of those visited, together with certain information obtained :—

	1946.	1947.	1948.
Inquiry Cards returned	19,319	21,413	18,695
Full information obtained	18,947	21,055	18,373
Doctor found in attendance	—	—	—
Others	372	358	322
Inquiry Cards issued	19,713	21,196	18,474

VISITATION BY NURSES.

Altogether the health visitors made 228,280 home visits during the year, compared with 219,677 during the preceding year. Of these totals the respective numbers for infants under one year of age were 89,756 and 91,761. First visits numbered 18,058. In addition 66,622 visits were made to houses in respect of toddlers, while 12,927 other toddlers were seen during the course of routine visitation of infants. Other visits were made for special enquiries, etc., as shown in the following table :—

VISITS MADE BY NURSES.

	1947.		1948.	
Infants under one year—Primary visits ...	20,779		18,058	
Infants under one year—Subsequent visits	70,982	91,761	71,698	89,756
Children one to five years		57,123		66,622
Children seen while visiting infants ...		10,214		12,927
Ophthalmia Neonatorum		2,489		2,059
Puerperal Fever		669		513
Maternal Deaths Enquiries		86		70
Infant Deaths		630		470
Ante-natal Visits		6,546		5,543
Venereal Diseases		167		140
Light Treatment		799		754
Pneumonia		5		13
Other Visits		3,409		1,069
Houses Shut		30,439		34,518
Final Visits		15,340		13,826
		219,677		228,280

THE HEALTH VISITOR*

The idea of the health visitor is over a century old and originated when the infant mortality of our big cities was in the neighbourhood of 200 in every thousand living births each year. At that time, advanced thinkers began to realise the devastating ravages upon infant lives occasioned by ignorance and neglect, and there was a growing belief that if the principles of hygiene which the nurse could impart were successfully applied in the home much of this menace would disappear. That this was true has been shown by the decline in the infant mortality rates throughout the country and by the spread of the influence of the health visitor to cover the infant welfare centres and ante-natal clinics.

The extent of this decline in infant mortality has provoked discussion as to whether there still remains as much need for the health visitor as hitherto or whether her energies could be more economically spread over other fields. The line of argument on which such a point of view is based can best be refuted by considering for a moment whether it would be logical to suggest that because dysentery and enteric fever had declined the health authority should now dispense with sanitary inspectors and food inspectors. In actual fact, in large cities such as ours the infant mortality rate has by no means reached the low level for which we constantly strive, and it is only by persistent and continuous efforts that satisfactory results can ever be achieved. Guidance and education of mothers is really the basis on which the good health of a country is built, and the main educators are the health visitors entering the homes. This work can never stop, as year after year new mothers come under their supervision, so that a Public Health Department cannot do without an adequate supply of child welfare health visitors.

More recently the health visitor has entered the tuberculosis field and associated herself with housing and school inspection. Glasgow first became interested in municipal housing following the City Improvements Act, 1866, but the major part of the building operations followed the first world war. To-day, the city factors 66,500 houses, of which 64,000 have been provided since 1919. Invaluable work has been carried out by the health visitor service in assisting the families rehoused from condemned areas to adapt themselves to their new surroundings.

---

* Extract from a paper read by Dr. Stuart Laidlaw at the Annual Meeting of the Health Visitors' Association in Glasgow in May, 1949.

The National Health Service (Scotland) Act has again widened the functions of the health visitor, and has suggested in Section 24 that the health visitor is now required to give advice to all members of the family. I very much doubt whether health education of the over 40's is really worth while. Usually by that time the habits of life are so firmly established that it is beyond the power of the most enthusiastic person to alter them, and it is undoubtedly much more profitable to concentrate on those whose minds and habits are still in the making.

Recently there has been a number of publications in the medical and lay press implying that the functions of the health visitor and the hospital almoner should be combined. Perhaps the leading memorandum on this matter is by Drs. I. G. Davies and Fraser Brockington, who have suggested a course of study for a combined health visitor and almoner covering a period of 3½ to 4 years. Briefly, the course consists of eighteen months' basic training in nursing, six months' special training in public health work at the University or Public Health Department, and a University course similar to that devised for the Diploma in Social Service. Should such a scheme be adopted, it would result in the production of health visitors at the age of 20. These health visitors would have had only eighteen months' hospital tuition and, in the view of the authors of the memorandum, should be capable of acting either as hospital almoners or health visitors. I am sure you will agree with me that the adoption of such a scheme would result in the destruction of an adequate health visitor service for the following reasons :—

(1) The nursing experience which these candidates possessed would be insufficient ;

(2) they would have little or no experience of infectious disease or tuberculosis, nor would they possess Part I of the C.M.B. Examination ;

(3) they would be much too young to be acceptable as advisers to the average family ;

(4) it is doubtful if the Chartered Society of Almoners would agree to modify their course of instruction to include eighteen months' nursing ; and

(5) the whole conception is based on the view that the Government will accept the Report of the Working Party on the Recruitment and Training of Nurses, which recommends that state registration can be gained by a period of eighteen months' basic nursing plus six months' training in a specialty—in this case public health.

The conclusion at which we arrive is that the training of almoners and the training of health visitors must continue to be along different lines, and that both groups will have their part to play in a comprehensive health service.

The Health Service Act has placed on local health authorities responsibilities in the field of after-care, and the National Assistance Act contemplates responsibility for what promises to be a comparatively full range of general welfare facilities. These duties are in addition to their original function as teachers of hygiene and public health in the home. In order to carry out the new duties adequately, there must be the fullest possible degree of co-operation between the almoner and the health visitor services, otherwise there will be overlapping of duties and diminished efficiency. There are cases where hospital authorities run after-care clinics, *e.g.*, for diabetics, where the work of almoners and health visitors in relation to after-care is inextricably interwoven. There is no doubt that the best way to secure the necessary co-operation between the almoner and health visitor service is for the senior health visitor to establish cordial informal relations with the head almoners of the hospitals within the local health authority's area.

There are two further points which I feel I should mention—first, the care and after-care of the aged, and second, the importance of health education. The care and after-care of the aged provides a field of activity for local health authorities which has hardly yet been explored. The problem is an extremely large and urgent one, especially in view of the ever growing waiting lists which confront the admission departments of our general hospitals. The population generally is tending to age, that is, the proportion of persons over 60 years is rising from year to year, while the proportion of young men and women leaving school or the university is becoming smaller. It is obvious that, as the majority of the latter are required to work on the land and in commercial and industrial undertakings or become wives and mothers, the number of recruits for the nursing service cannot indefinitely expand. Everything, therefore, must be done to diminish the pressure on hospital beds, and there is no doubt that proper and adequate co-operation of the health visitor with the home nursing and the home help services can do much in this respect. In addition, full advantage must be taken of the powers conferred on the local health authority by the National Assistance Act, to expand the number of old persons' homes and develop a good meals-on-wheels service.

It is possible to absorb the entire number of health visitors in the service of the local health authorities in providing for care and after-care alone. I think this would be a retrograde step, for we must always keep in mind that the trained health visitor can give her best service to young mothers and children. This being so, the conclusion we come to is that the local health authority will require to set up a geriatric service under the Medical Officer of Health to undertake the care and after-care of the aged. Both a medical officer and a social service officer should be attached to this service, which could well be staffed by persons of experience not necessarily possessing the qualifications of the fully trained health visitor. The services of a medical officer would be required for opinions on health matters and perhaps to conduct a geriatric clinic, while the social service officer and his staff would co-operate with the home nursing and home help sections and would form a close liaison with the almoners attached to the hospitals from which the patients were discharged.

The task of informing the public on health matters is a vital one which must be undertaken principally by Public Health Departments, although aid can be obtained from the Scottish Council for Health Education. As I have already said, the most efficient method of instructing the public is by personal contact, although in recent years instruction by cinema has been found useful, especially when dealing with children and adolescents. Health visitors sometimes feel that too large a proportion of their duties is devoted to clinic work, and that more time should be spent in the district as otherwise there is a definite risk of the home visitation not being fully covered. A further point frequently raised at conferences by health visitors is that much of the school work could be left to trained nurses. I feel that the crux of this whole argument depends on where the expert health visitor can best carry out her teaching functions. Undoubtedly, a health visitor is largely wasted in a scabies clinic, whereas the tuberculosis health visitor can do really useful work at a tuberculosis dispensary. In the latter case, the fact that the sister who visits the house is also present at the clinic helps to sustain continuity of treatment by encouraging better attendance and is also reassuring to the patient. He feels that the sister fully understands his case and the problems which his illness must of necessity cause within his home.

In all forms of health education it should be remembered that the vast majority of people are much more interested in ill health than in the maintenance of good health. Pathology still dominates the medical curriculum and, to a large extent, the minds of Ministers of State. It cannot be too often emphasised that the whole purpose for which the Public Health Department exists is the promotion of good health and the prevention of disease. Too close an attachment to curative medicine tends to obscure these salient features, whereas open association with research departments of Schools of Hygiene is to be commended.

HOME NURSING SERVICE.

The Glasgow District Nursing Association has one main Home at 218 Bath Street, an Office at 196 Bath Street, and District Homes as undernoted :—

722 Crow Road, W.3.
2064 Maryhill Road, N.W.
49 Hillkirk Street, N.
42 Circus Drive, E.1.
1107 Aikenhead Road, S.4.
34 Marywood Square, S.1.
8 Brighton Place, S.W.1.

The staff consists of a Chief Superintendent, four Assistants, and a Superintendent or Chief Nurse in each of the District Homes.

The number of district nurses varies between 90 and 100. These nurses are engaged on either general or maternity work. The maternity nurses carry out about 2,000 confinements a year.

NURSES AGENCIES (SCOTLAND) REGULATIONS, 1945.

Under the above Regulations nine Agencies were licensed.

DAY NURSERIES.

There are now 16 day nurseries, that at Broompark Circus, Dennistoun, having been opened on 19th April, 1948. Three of the remaining nurseries were in existence prior to the war, and of those organised during the war 12 have been retained.

The total accommodation provided is now 724, although this number may be increased according to the number of young children under 2 years of age admitted. The beds available are usually fully occupied except when infectious disease or other illness makes it necessary to exclude children in order to prevent the spread of disease.

The post-war drive for exports and the return of many women to industrial employment has kept up the demand for nursery accommodation. The waiting list for admission in the respective districts would appear to be nearly double the accommodation available but there are practically no houses of suitable size vacant or for sale anywhere in the city and the Committee agreed that any possible extension of day nursery service in the future should be utilised for the care of children who require the service for social or medical reasons and not for the purpose of enabling married women workers to return to industry.

The following statement gives the statistics in respect of the work of the nurseries during the year :—

DAY NURSERIES.

NURSERY.	Days Open.	Attendances during Year.	Average Daily Attendance.	Maximum in One Day.	Number of Places provided at end of Year. 0-2 yrs.	2-5 yrs.	Places taken at end of Year.
Central—							
Gt. Western Road	290	7,086	24	37	20	20	38
Sandyford Place	243	10,259	45	50	14	36	48
North—							
Cowcaddens ...	247	8,442	34	42	18	27	43
Hamiltonhill ...	243	8,596	40	44	15	30	50
Broompark Circus	170	6,157	33	50	22	37	58
East—							
Bridgeton ...	244	10,643	44	51	22	28	48
Trail Street ...	244	9,158	37	46	18	32	50
Onslow Drive ...	245	10,523	43	53	20	40	56
Quarrybrae ...	244	4,169	17	20	16	4	20
Westercraigs ...	245	8,760	35	47	15	30	45
South-East—							
Bedford Street	244	6,964	29	38	10	35	36
Holmlea Road...	244	10,944	45	53	20	30	51
Pollokshaws ...	245	8,058	32	43	10	30	42
South-West—							
Kingston ...	245	9,096	37	43	14	26	45
Clutha Street ...	245	8,946	37	44	20	30	50
Elderpark ...	243	8,462	35	45	25	25	44

Residential Nurseries.—The following statement gives particulars of the work of the residential nurseries and country homes. There was no alteration or addition to the accommodation. The short-stay residential homes are provided for the admission of children whose parents, owing to the illness of the mother, are unable temporarily to care for the children. No child is allowed to stay longer than two months. A charge is made for the care of the children according to the Corporation Scale of Necessity.

	Type of Accommodation.	Total Admissions during Year.	Number of Beds provided at end of Year. 0-2 Years.	2-5 Years.	Others.
9 Winton Drive ...	Short Stay.	298	16	17	—
Glenrosa, 47 Maxwell Drive.	Do.	322	11	24	—
Scotstoun House ...	Children's Home.	129	—	40	—
Castlebank House ...	Convalescent Home.	100	35	—	—

Country Homes.—Both country homes were open during the whole year. Scotstoun House reverted to its pre-war purpose in July, 1946, while Castlebank House was requisitioned in June of that year, the commodation having been utilised for casualty purposes during the war. The question of rebuilding Mount Blow Country Home, which was burned down during enemy bombing in 1941, has been under consideration from time to time but the matter has been delayed because of negotiations by the Burgh of Clydebank who acquired the site for housing development.

NURSERIES AND CHILD MINDERS.

The Nurseries and Child-Minders Regulation Act, 1948, came into operation in August, 1948.

No nurseries connected with factories are in operation in Glasgow.

The following Private Nurseries, Nursery Classes, and Play Centres have been registered :—

29 Oakfield Avenue, W.2.
329 Sauchiehall Street, C.2.
10 Comrie Street, E.2.
28 Hamilton Park Avenue, W.2.
Stobcross House, 189 Stobcross Street, C.3.

HOME HELP SERVICE.

The Home Help Scheme was started in a voluntary way by the Child Welfare Nurses about thirty years ago when arrangements were made direct between the applicants and the women recommended. It was not until 1924 that the scheme was administered direct by the Department and at that time about 30 helps were employed at a rate of 5s. per day. Thereafter the scheme was continued in connection with maternity cases. During the early years of the war the organisation practically faded out when many women took up munition work. etc., at higher wages.

The whole scheme was resuscitated in May, 1941, but was restricted to families in which there was either a pregnant or recently confined woman or a case of chronic sickness unlikely to benefit by hospital treatment.

Since the war increasing use has been made of the Home Helps and at 5th July, 1948, when the National Health Service Act came into operation, there were 368 Home Helps on the register but by the end of the year this number had increased to over 500, one-third of them being on the Maternity Scheme and two-thirds on the General Illness Scheme.

This increased demand is largely associated with the care of elderly persons who have no family living with them or within the city. There has been a slight decrease in the number of applications for Maternity Helps, 2,585 compared with 2,588 during 1947. This decrease is associated with the reduction in the birth rate. Of these applications, 1,917 were completed, 311 were cancelled, and 357 were carried forward for completion in 1949. There were 25,810 working days.

In the General Scheme the applications numbered 2,181 against 2,189. Of these, 248 were cancelled, leaving 1,933 cases to be dealt with, compared with 1,748 for the previous year. There were 47,193½ working days.

The charges for both schemes are made in accordance with the Corporation Scale of Necessity. They vary from 1s. to 12s. 4d. per day. Expenditure on the Maternity Scheme was £26,183, of which £8,785 was repaid. The net cost of the General Scheme was £25,311, after repayment of £12,287. In the Maternity Scheme 5 per cent. of the applicants paid only 1s. to 11s. and 13 per cent., 11s. to 12s. 4d. In the General Scheme the percentages were 30 and 25 respectively.

The following table shows the illness or other conditions under which applications for Home Helps under the general scheme were made :—

	General and " E " Schemes			
Diseases.	—40 yrs.	40-60 yrs.	+60 yrs.	Totals.
Influenza	12	19	9	40
Cancer	1	24	36	61
Diabetes	—	2	22	24
Intra Cranial Vascular Lesion ...	1	19	168	188
Heart Disease	17	85	238	340
Circulatory	16	100	200	316
Bronchitis	8	29	71	108
Pneumonia	4	7	21	32
Pleurisy	6	10	9	25
Respiratory	1	3	18	22
Digestive	5	26	53	84
Kidney Disease	4	9	12	25
Nervous Diseases	13	34	47	94
Debility following illness	4	14	37	55
Debility following operation ...	44	106	91	241
Accident	9	31	94	134
Rheumatism	11	44	100	155
Puerperal Fever and Pyrexia ...	—	—	—	—
Phlegmasia Alba Dolens	—	—	—	—
All other causes	10	26	37	73
Totals	166	588	1,263	2,017

Maternity Bundles.—Bundles or part bundles to the number of 1,403 were supplied in respect of which part payment received amounted to £25 3s.

MIDWIVES (SCOTLAND) ACTS.

During 1948 there was a decrease of 3 in the number of midwives who notified their intention to practise, so that there are now 162 on the register. The number of those entitled to registration by examination is 155, while the number of those registered as having been in practice in 1914 is now 4. There are also 3 with other recognised qualifications. The number who notified their intention to practise for the first time was 22.

During the year there were 1,636 occasions on which medical help was called by midwives, which represents 33·4 per cent. of the total births occurring in the practice of midwives. Details of the nature of emergency are not given this year, but the following indicates the period during which medical assistance was called :—

	1945.	1946.	1947.	1498.
In all cases in which a woman during pregnancy, labour, or lying-in appears to be dying or is dead	—	—	—	—
PREGNANCY.—In cases of a pregnant woman where there is any abnormality or complication	35	36	58	31
LABOUR.—In the case of a woman in labour at or near term, where there is any abnormality or complication ...	985	1,566	1,723	1,139
LYING-IN.—In the case of a lying-in woman, when there is any abnormality or complication	189	326	295	253
THE CHILD.—In the child, when there is any abnormality of complication ...	180	282	348	212
Cannot be classified	—	3	2	1
Total	1,389	2,213	2,426	1,636

Fees to doctors attending emergency cases amounted to £1,920 13s. 6d. and during the year £998 11s. 1d. was recovered and £3 9s. withdrawn from medical practitioner's accounts.

CASES OF PUERPERAL FEVER OCCURRING IN THE PRACTICE OF MIDWIVES.

Year	Midwives	Cases Notified	Year	Midwives	Cases Notified
1939	45	62	1944	31	39
1940	42	61	1945	31	38
1941	31	41	1946	28	42
1942	24	31	1947	42	63
1943	29	39	1948	27	33

On the 21st June, 1940, the services of salaried municipal midwives were made available to all cases at charges made in accordance with a scale of necessitousness approved by the Corporation.

The essential details of this service since its inception are shown as follows :—

Year	Applications			Amount	
	Received	Refused	Granted	Recoverable	Recovered
1940	1,139	163	976	£510 6 0	£373 5 0
1941	1,662	234	1,428	1,721 2 0	1,475 16 6
1942	1,928	203	1,725	2,191 13 0	1,806 19 0
1943	2,705	245	2,460	3,099 0 0	2,856 13 6
1944	2,770	215	2,555	3,130 6 0	2,857 16 6
1945	2,704	237	2,467	3,000 17 0	2,627 3 4
1946	4,454	261	4,193	5,221 9 0	3,821 8 0
1947	5,330	355	4,975	6,405 19 0	5,808 2 0
1st Jan.– 4th July., 1948	2,101	213	1,888	1,826 1 0	2,577 19 0
5th July– 31st Dec., 1948	2,950	128	2,822	—	—

Domiciliary Midwives.—The number of domiciliary midwives is now 87, of whom 29 are independent midwives employed by the Corporation under the National Health Service Act. The expectant mothers booked by the midwives attend the Corporation ante-natal clinics or own doctor, but in addition the midwives paid 17,692 ante-natal visits to their patients. 64,972 visits were also carried out during the puerperium. In addition the domiciliary midwives are responsible for the domiciliary training of the pupil midwives from the various Corporation Hospital Maternity Units and a certain number of pupil midwives from the Glasgow Royal Maternity and Women's Hospital. During the year 164 pupil midwives were so trained. The scheme provides that there is always a domiciliary midwife and/or one of the non-medical supervisors with the pupil midwife at each confinement.

NURSING HOMES REGISTRATION (SCOTLAND) ACT, 1938.

Four applications for registration of Nursing Homes were made during the year. Two of these were granted and the remaining two cases were still under consideration at the end of the year. All the applications were for new certificates consequent upon a change of management. In addition, three applications which had been made in previous years and which were under consideration at the beginning of 1948 were also granted.

Seven certificates were withdrawn. Five of these were in respect of Homes in which there had been a change of management and in one case the Home was given up. In the remaining case, the Home came under the administration of the Western Regional Hospital Board.

With the coming into operation of the National Health Service (Scotland) Act, 1947, during the year, in addition to the Home above referred to, one Maternity Hospital and ten General Infirmaries and Hospitals which had been exempted from registration under the Nursing Homes Registration (Scotland) Act, 1938, also came under the administration of the Western Regional Hospital Board and, in consequence, are no longer required to apply to the Local Authority for registration or exemption.

The position of Nursing Homes as at 31st December, 1948, was as follows :—

Registered	36
Exempted	5
Total	41

OPHTHALMIA NEONATORUM.

The incidence of ophthalmia neonatorum continues to show the downward trend which has been manifest during the past few years. Two hundred and sixty-three cases were notified as compared with 305 in 1947 and 340 in 1946.

An analysis of all notified cases was made with the undernoted result.

Ophthalmia Neonatorum	106
Purulent Conjunctivitis	91
Simple Conjunctivitis	50
Dacryocystitis	1
Stye	1
Keratomalacia	1
Nothing Abnormal detected	13
	263

All cases notified according to nature of attendance at birth :—

Doctors	23
Institutions	62
Institution Nurses	70
Midwives	108
	263

All cases classified according to age at onset :—

—12 hours	23
— 4 days	72
— 8 days	74
+ 8 days	81
Nothing Abnormal detected	13
	263

Bacteriological examination was made in all cases and eight were found to be positive for gonococcus compared with nine in 1947 and sixteen in 1946.

Thirty-two cases were admitted to Baird Street Hospital for treatment and other 41 attended as outpatients and made 169 visits. The remaining cases were treated by health visitors who made 2,059 visits in all. In addition eight cases, one of which was positive for gonococcus, were admitted to Baird Street Hospital from other authorities.

Treatment by the use of sulphathiazol and penicillin was continued and in no case was there any impairment of vision.

The Wassermann test for syphilis was found to be positive in only one case.

PUERPERAL FEVER AND PUERPERAL PYREXIA.

During the year there were registered 250 cases of puerperal fever and 122 cases of puerperal pyrexia compared with 310 and 143 respectively for the preceding year. All the cases of puerperal fever and all but 9 pyrexias were removed to hospital or other institution.

Deaths associated with cases of puerperal fever *notified* during the year numbered 7. This is equal to a fatality rate of 2·8 compared with 3·5 for the preceding year.

Among the cases registered as puerperal pyrexia there were 11 deaths which under the International Classification of Deaths would be tabulated as follows : pulmonary tuberculosis, 5 ; bronchitis, 1 ; pneumonia, 2 ; puerperal sepsis, 2 ; other maternal causes, 1. Excluding 8 deaths which had little association with the puerperal state, the combined mortality rate on the 10 deaths from puerperal conditions is, therefore, 2·7 per cent. compared with 3·0 per cent. for 1947.

SECTION IV.

INFECTIOUS DISEASES.

The total number of cases of infectious disease registered maintained a low level at 31,549 compared with 31,355 which was the lowest hitherto recorded. In addition there were 3,023 cases, all of which, with the exception of 7, were removed to hospital and ultimately diagnosed as non-infectious; the corresponding number for the previous year was 3,154.

Of the total cases registered 8,794 were treated in fever hospitals and 1,473 in other institutions, mostly general hospitals, and were largely composed of respiratory diseases for of this latter number, 1,356 were cases of acute primary or influenzal pneumonia.

The increase in the number dealt with is accounted for by the prevalence of measles for 8,132 cases were recorded compared with 4,220 during 1947. Chickenpox was also more prevalent, with a total of 6,876 cases against 5,553. The increased prevalence of scarlet fever continued throughout the year and the cases registered numbered 3,908 compared with 3,567 during 1947. Details of notifiable and non-notifiable cases, showing those treated in hospitals and other institutions, etc., are given in the Appendix Table XV, while the seasonal prevalence is shown in Appendix Table XVI.

SMALLPOX, ETC.

During the year relatively few intimations of smallpox contacts were received; while the numbers of persons returning by aeroplane from countries where smallpox is present have been less numerous.

Vaccination.—The Vaccination (Scotland) Acts, 1863-1907 were repealed by the National Health Service Act as from 5th July when the latter Act became operative. The new Health Service Act empowers Local Authorities to make provision for the continuance of free immunisation and vaccination and in that respect arrangements were made for the supply of vaccination lymph to general medical practitioners according to the following circular letter:—

VACCINATION AGAINST SMALLPOX.

I would like to draw your attention to the importance of having your baby protected against smallpox. In a city like Glasgow where ships are constantly arriving from abroad, there is always a danger of the disease and we have frequently had experience of this kind. This danger is now increased by air travel since passengers from countries where smallpox is common may arrive in this country before showing signs of the disease.

It is therefore very important that every child should be protected. This can be done by having him vaccinated at an early age ; the best time is when he is 1-2 *months old. At this time there is little chance of your child being upset.*

May I also remind you that your child should be immunised against diphtheria as soon as possible after he is 8 *months old and certainly before his first birthday.*

He can have this protection against smallpox and diphtheria if you will take him to your own doctor or to any of the Clinics mentioned overleaf, and this I would most earnestly ask you to do.

NOTE.—*See list given on page* 82.

The following table, based on information supplied by the Registrar General for Scotland, gives some details of the administration of the Vaccination Act up to the end of 1947. Under compulsory vaccination in 1906 almost 83 per cent. of babies were vaccinated, while 10·6 per cent. died before vaccination and 5·0 per cent. were unaccounted for. Before the war the percentage vaccinated was less than 40·0 but following the outbreak of smallpox in 1942 the percentage increased to 60 and has been maintained at a little below that figure since.

TABLE SHOWING RESULTS OF PRIMARY VACCINATION OF CHILDREN BORN DURING SEVERAL YEARS.

(*From the Detailed Annual Reports of the Registrar-General*).

Year.	Successfully vaccinated. Per cent.	Insusceptible of vaccine disease. Per cent.	Died before vaccination. Per cent.	Conscientious objection to vaccination. Per cent.	Vaccination postponed. Per cent.	Unaccounted for. Per cent.
1906	82·9	0·5	10·6	0·2	0·8	5·0
*	*	*	*	*	*	*
1914	51·7	0·9	12·1	25·1	1·8	8·4
*	*	*	*	*	*	*
1939	39·6	2·3	7·4	41·6	1·6	7·5
*	*	*	*	*	*	*
1942	60·8	3·3	7·6	18·7	1·7	7·9
1943	56·7	3·5	7·4	22·1	0·4	9·9
1944	56·0	2·8	8·2	22·6	1·2	9·2
1945	56·5	3·6	6·1	21·6	0·5	11·7
1946	59·0	3·2	6·1	19·8	0·0	11·9
1947	56·7	3·4	6·3	18·9	1·1	13·5

It is probable that some part of the maintained percentage of children protected by vaccination can be ascribed to the continuance of the campaign for immunisation of children against diphtheria carried on at Child Welfare Clinics. Some of the parents at least are becoming educated to the protection afforded against certain diseases by immunisation. In 1947 the number of vaccinations at these clinics was 4,928, while for the first part of 1948 to 5th July the number was 2,474. From that date until the end of the year, however, the number fell to 1,025. From the date of the coming into operation of the National Health Scheme on 5th July to the end of the year notifications of vaccination by private medical practitioners numbered 1,641, of which 340 were for persons over 5 years of age (mostly re-vaccinated), the balance, apart from two for whom the age was not stated, 1,299 were under 5 years. This number would appear to make up the reduction of vaccinations done at child welfare centres during this period.

ENTERIC AND DYSENTERY.

Typhoid.—These cases were again few and numbered only twelve including one harbour case. Although five of them came from two households, every Division was involved in the year's total. In addition to the twelve cases a Glasgow chronic carrier was found during the investigation of a county outbreak.

The carrier was an unmarried retired school teacher aged eighty. In 1895, it is said, she had been a sporadic case of enteric fever in a burgh on the outskirts of Glasgow and had been too ill to be removed to hospital. In 1925 she gave rise to a group of three infections but remained undetected despite routine examination as a contact. Some details of this group are on record. One member was her niece, aged 16, who came on holiday to her at her country cottage but contracted typhoid and died in hospital after operation for perforation. Another case was the niece's friend, a girl also aged 16. The third infection was of a woman, aged 33, related to the latter ; she proved to be merely a contact carrier and was the only positive contact detected in connection with the cases.

During her career as teacher and headmistress the carrier often served school dinners but never was associated with school typhoid cases. Since retiring in 1931 she has lived either in her Glasgow home, which she shares with her sister and another female relative, or in her country cottage. At the cottage there is an Elsan closet, the contents of which have been duly treated with disinfectant before disposal in the garden. The night urine, however, has not been disinfected, and the county officials demonstrated by fluorescin test that water deposited in the same place reached the nearby burn in about five minutes. This burn was an important feature in the outbreak recorded by the county authority.

Bacteriological examination of the carrier in Glasgow showed both urine and faeces to be positive. The typhosus agglutination tests were negative for 0 agglutinins but positive H 1/250 and Vi 1/160.

Paratyphoid.—The total of three cases is the lowest recorded since paratyphoid B began to be separately reported in 1925. One case was institutional. The other two were both young men from Pollokshaws ; but no definite connection could be discovered between them and there was an interval of six months between their illnesses.

Dysentery.—There was a steep rise to 1,178 cases, an annual total previously exceeded only in the last two war-years. The numbers of home and institutional cases and their seasonal distribution were as follows :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Home Infections	102	222	305	344	973
Institutional	7	53	75	70	205

The figures for home infections show that there was a genuine increase in the number of foci of infection in the city and that the infectivity was still high at the end of the year. There is, therefore, still need for vigilance regarding diarrhoea among food handlers and in institutions.

The institutional cases came from twenty-two institutions and the total number of these cases can be regarded as satisfactorily low. They formed 17 per cent. of all cases compared with an average of 23 per cent. over the preceding five years. Six residential institutions for children yielded 130 cases ; these included two Flexner outbreaks but were mainly of Sonne dysentery and some of the outbreaks were prolonged. The general hospitals provided very few cases but there were 40 cases from Foresthall. There the cases were distributed throughout the year and consisted chiefly of children already suffering from or incubating the disease on admission.

The age distribution of the year's cases was as follows :—

	–1	–5	–15	–55	55–	Total.
Home Infections ...	68	463	215	193	34	973
Institutional	21	132	13	31	8	205

It is seen that the disease continues to affect mainly children and especially those below school age. It thus seems advisable that in children's residential institutions the practice should be continued of taking routine bacteriological specimens on admission to exclude missed dysentery cases and carriers. Particular care should also be taken regarding the admission or re-admission of known Sonne convalescents.

Further details of the incidence among children aged one to four years are given in the following table :—

	1–2	–3	–4	–5	Total.
Home Infections ...	135	142	112	74	463
Institutional	36	51	28	17	132

Thus the maximum incidence of dysentery occurs in children aged one to three years and precautions are of special importance in respect of toddlers.

SCARLET FEVER.

Cases of scarlet fever were again more numerous for 3,908 were registered compared with 3,567 during 1947. Since the minimum number was recorded in 1940 when many of the children of susceptible ages were evacuated because of the bombing by the German Air Force, there has been a more or less continuous rise in the incidence of scarlet fever coincident with a gradual reduction in the mortality from the disease to a very low level.

This increasing prevalence is probably due to a combination of various factors, chief among which are (*a*) the larger susceptible child population which has resulted from the higher birth rate of recent years, (*b*) the return to the city of susceptible children dispersed during the war years and who escaped infection in the country, and (*c*) the mildness of the disease in recent years resulting in many non-clinical cases escaping notice and so infecting others. The number of cases treated at home, 1,332, compares with 1,467 for the previous year, or 34 per cent. and 41 per cent. respectively. In the early years of the century the percentage of cases remaining at home was about 5 to 6.

Mortality still remains at practically minimum level for there were only 3 deaths, 2 of them being adults, one male and one female both over 35 years, whereas in the previous year all 5 deaths were among children.

The seasonal incidence of the disease is given in Appendix Table XVI which shows that the usual autumnal rise was later than is usual. The maximum incidence occurred in January when 493 cases were recorded.

The incidence was heavy in Parkhead with 190 cases, while there were only 33 in Exchange Ward ; in Pollokshields there were 186 cases against 37 in Camphill ; and 148 in Fairfield compared with 42 in Park Ward, differences which are not wholly explained by the respective numbers of susceptible children in those wards.

DIPHTHERIA.

Under the influence of the immunisation campaign which started in 1940 the number of cases of diphtheria continues to decrease. In 1948 there were only 286 cases of the disease compared with 502 for the previous year and 1,458 in 1946. The great reduction in the incidence of the disease has fortunately released a considerable number of hospital beds at the present time when the accommodation is so much reduced because of staffing difficulties. A considerable number of cases, however, still continue to be taken into hospital at the request of medical practitioners who, playing for safety, wish their patient to receive antitoxin with the least possible delay. Many of these cases prove to be tonsillitis.

The highest incidence of the disease continues in the age period 5-10 years, with 45 males and 52 females out of a total of 115 males and 170 females for all ages.

The seasonal prevalence is given in Appendix Table XVI which shows that the variations from month to month are now less marked than formerly. The highest number was 34 in March whereas in previous years the maximum incidence occurred at the end of November or beginning of December.

Mortality from the disease has been further reduced for only 8 deaths occurred during 1948 compared with 13 for the previous year. None of those who died had been immunised and 6 of them were under the age of 5 years.

When the National Health Service (Scotland) Act came into force arrangements were made for the supply of Alum Precipitated Toxoid and Purified Toxoid Aluminium Phosphate Precipitated from the following centres :—

23 Montrose Street	Night and day.
*26 Florence Street, Gorbals	Monday–Friday, 9 a.m.–5 p.m. Saturday, 9 a.m.–12.30 p.m.
*Glenbarr Street, Garngad	
*Sandy Road, Partick	
Govan Town Hall	
106 Orr Street, Bridgeton	Monday–Friday, 9 a.m.–5 p.m.

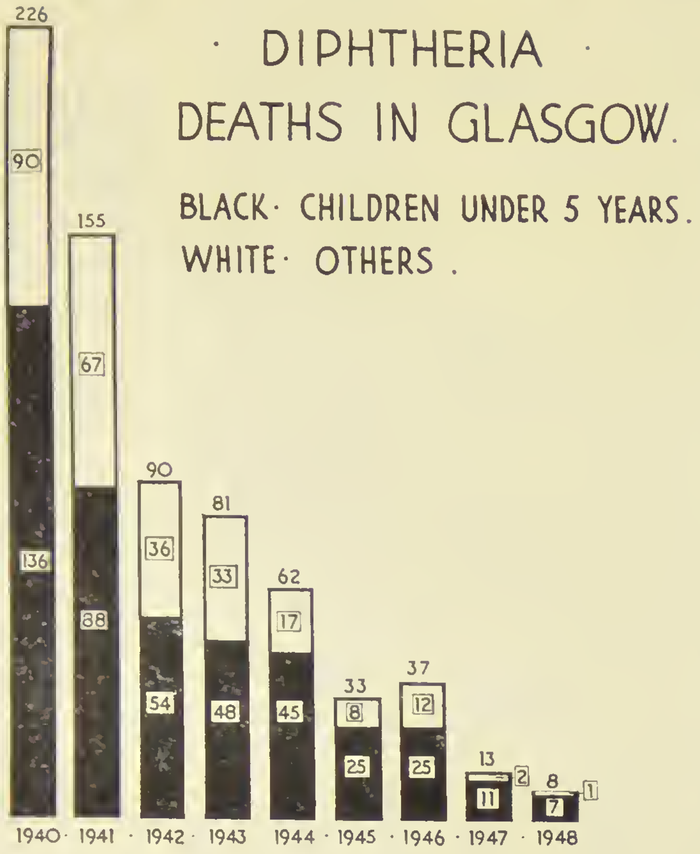
* Closed 12.30–1.45 p.m.

Immunisation and Vaccination Centres in operation for some years were continued at the following Centres :—

	2 p.m.
North—	
60 Avenuepark Street, Maryhill	Wednesday,
Glenbarr Street, Garngad	Wednesday.
89 Killearn Street, Possilpark	Tuesday.
West—	
Sandy Road, Partick	Thursday.
Central—	
130 William Street	Tuesday.
Dispensary, Sick Children's Hospital, West Graham Street	Tuesday.
South-West—	
Southern General Hospital, Govan	Tuesday.
27 Govan Road, Govan	Tuesday.
Househillwood Social Centre	Friday.
South-East—	
26 Florence Street, Gorbals	Monday.
Victoria Infirmary, Langside	Friday.
East—	
10 Redan Street, Bridgeton	Thursday.
155 Crail Street, Parkhead	Tuesday.

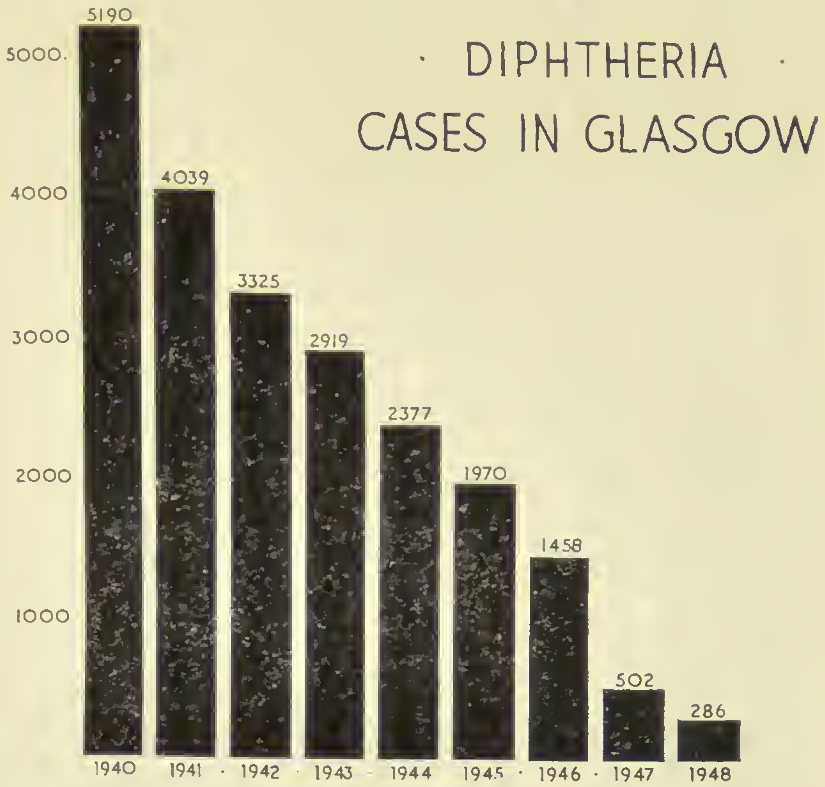
Diphtheria Immunisation.—Since the diphtheria immunisation campaign was started in the autumn of 1940 there has been a steady decrease in the number of cases of diphtheria and deaths from the disease in the city. The figures are as follows :—

		Deaths		
Year.	Cases.	−5 Years.	+5 Years.	Total.
1940	5,190	130	90	226
1941	4,039	88	67	155
1942	3,325	54	36	90
1943	2,919	48	33	81
1944	2,377	45	17	62
1945	1,970	25	8	33
1946	1,458	25	12	37
1947	502	11	2	13
1948	286	7	1	8



· DIPHTHERIA ·
DEATHS IN GLASGOW.

BLACK· CHILDREN UNDER 5 YEARS.
WHITE· OTHERS .



· DIPHTHERIA ·
CASES IN GLASGOW

The facilities for diphtheria immunisation which are available are as follows :—

(1) Thirteen diphtheria immunisation clinics are held each week in different areas of the city. These deal with children of all ages.

(2) Immunisation is carried out at all Child Welfare Centres.

(3) School entrants are offered facilities at their first medical examination.

(4) Children in day nurseries and nursery schools are immunised on admission.

A special campaign is carried out each Spring. Arrangements were made for a Medical Officer to visit each school on specified dates. Propaganda was carried out in the press, cinemas, and by special posters on trams and buses. An appeal was issued to the parents of each child in the form of a pamphlet from the Director of Education and the Medical Officer of Health pointing out the desirability of having their children protected and the urgent need of accepting this special opportunity. Children under school age were allowed to attend these special sessions. As a result of this campaign in 1948 about 11,000 children were immunised and 6,000 were given a reinforcing dose.

Birthday letters are sent to the parents of children of one year who have not been immunised. These cases are picked up by the health visitors in the course of their visitation. A similar letter is sent to the parents of toddlers known to the health visitors to be still unprotected.

	Letters Sent.			Number immunised under 5 years of age.
	Infants.	Toddlers.	Total.	
1946	5,686	5,814	11,500	8,745
1947	6,846	8,210	15,056	10,560
1948	7,490	8,972	16,462	12,701

Since 5th July, 1948, when the National Health Service Act came into force, patients can be immunised free of charge by their own doctor. Arrangements are made by the local health authority to provide diphtheria prophylactics to medical practitioners. The number of records of immunisation received from medical practitioners during the period July to December, was 1,461.

	No. of Children Immunised.			No. of Reinforcing Doses.		
	−5 years.	+5 years.	Total.	−5 years.	+5 years.	Total.
1946	8,745	3,734	12,479	61	1,723	1,784
1947	10,560	10,143	20,703	32	4,809	4,841
1948	12,701	9,819	22,536*	691	6,959	7,657*

* Age not stated—16.

* Age not stated—7.

The position at December, 1948, was that 33·5 per cent. of children under 5 years of age, or 41·9 per cent. between the ages of 1 and 5 years, were known to be immunised against diphtheria and that 67·17 per cent. of children between the ages of 5 and 16 years were so protected.

These figures relate only to cases regarding which full details of the immunisation have been sent to the Public Health Department. The Public Health Department is aware that many other children have been immunised during past years by their own doctor or elsewhere, but the details of the immunisation are not available. This is borne out by the information obtained from parents by the school medical officers during routine medical examination. This shows that 68 per cent. of the school entrants are fully immunised and that 81 per cent. of school children of all ages are similarly protected.

ERYSIPELAS.

Erysipelas with 480 cases has retained the low level to which it sunk in 1947. Of this total, 232 were removed to fever hospital and 4 to other institutions. Most of the cases occurred at ages over 45 years and female cases exceed the males at almost all the age groups. The total for males was 201 and for females, 279. February was again the month with the heaviest incidence, 61 cases, and May the lightest with 23. The case rate for 1948 was 433 per million of the population whereas before the war it was almost double that rate, 859 in 1938, while in 1933 it was 1,012.

The reduction in the mortality from the disease is most pronounced for the number of deaths, 5, compares with an average of 60 for 1929-31.

DISEASES OF THE CENTRAL NERVOUS SYSTEM.

Cerebro-spinal Fever.—The incidence of the disease shows a further reduction, 97 cases being recorded compared with 132 for the previous year. The highest number of cases was 8 in Cowcaddens, while Provan district and Kinning Park had each 6 cases. This infection is always more in evidence in the Spring although the greatest number of cases in one month, 13, was recorded during March and December.

	Cases Registered.	
	1948.	1947.
1st Quarter ...	32	49
2nd Quarter ...	19	40
3rd Quarter .	19	19
4th Quarter ...	27	24
	97	132

The following table is retained to show the war outbreak of the disease and the post-war outbreak. The concentration on the ages under 5 is pronounced and the incidence heaviest among boys. The death rate per million of the population, 13, is the lowest recorded since the disease became notifiable forty years ago. The mortality per cent. was heavier among females, 19·5 against 12·5 for males.·

	CASES.										Mortality per cent.		Death Rates per Million.
	−5		−15		−45		45+		Total.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1939	23	18	9	12	12	6	1	—	45	36	28·8	16·6	17
1940	125	102	27	36	89	58	14	6	255	202	21·5	18·8	89
1941	100	88	27	28	74	56	19	16	220	188	20·0	21·2	80
1942	46	37	25	18	30	24	9	9	110	88	23·6	27·2	48
1943	42	32	14	5	17	6	3	4	76	47	14·4	27·6	23
1944	38	33	11	9	12	15	5	6	66	63	25·7	17·4	27
1945	52	29	12	6	16	8	2	5	82	48	26·8	18·7	29
1946	74	63	18	17	21	23	6	5	119	108	12·6	10·2	24
1947	53	32	10	15	6	10	4	2	73	59	20·5	11·8	20
1948	38	27	12	6	6	7	—	1	56	41	12·5	19·5	13

Acute Encephalitis Lethargica.—There were 6 recorded cases in 1948 compared with 4 for the previous year. There was only one case of acute polio encephalitis against 19 in 1947.

Acute Poliomyelitis.—As compared with the explosive outbreak of acute polio-myelitis, 297 in 1947, which were very fully described in the report for that year, there were only 6 cases in 1948, three boys and three girls all under the age of 10 years. All the cases but one occurred during the autumn months, September to October, whereas the incidence of the previous heavy prevalence was more concentrated in August and September.

MALARIA.

Cases of malaria registered during the year numbered 28 compared with 32 in 1947. All were adult males with the exception of one female in the age period 35-45. Of the total 14 were treated in fever hospitals and 4 more in other institutions.

MEASLES.

There was a prevalence of measles during the year when 8,132 cases were registered compared with 4,250 for the year before. After a series of spring and early summer minor outbreaks, there has been a winter prevalence over the twelve months from the middle of 1947 to the middle of 1948. During this period the number of cases registered was 12,044. Even then the total is below the figure which in pre-war days would be regarded as a major prevalence, as shown in the following summary :—

	Cases.	Deaths.	Mortality per cent.
1936	20,196	311	1·5
1937	2,272	29	1·3
1938	15,839	257	1·6
1939	1,462	2	0·1
1942	8,303	65	0·8
1943	7,843	31	0·4
1944	6,364	16	0·3
1945	6,012	24	0·4
1946	9,696	24	0·2
1947	4,230	15	0·4
1948	8,132	23	0·3

The disease is not notifiable compulsorily but it is estimated that all but 10 or 15 per cent. are registered on information received from the Education Attendance Officers, cases reported by doctors for removal to hospital and the discovery of others in the houses visited and those in other houses in the same tenement. The small proportion that does not come to notice will be in some of the houses where children are all under 5 years of age. The total number of pre-school age cases registered in 1948 was 4,169, or more than half the total.

There were 23 deaths, 8 more than the previous year. This figure is relatively more favourable than that for 1947 for the mortality per cent. was only 0·3 compared with 0·4. This is somewhat surprising when it is considered that the heavier prevalence of the outbreak was during the winter period when mortality from the disease is usually heavy. Under similar circumstances there were 311 deaths in 1936 and 257 deaths in 1938. All the deaths took place at ages under 10 years.

The disease was more or less prevalent throughout the city. The highest numbers recorded were 624 in Ruchill, 610 in Provan and 500 in Cowcaddens. Statistics are given in Appendix Table XV and XVI. The number treated in hospital was 693 while 8 more were admitted to other institutions.

RUBELLA.

There were 219 cases against 1,126 for the previous twelve months.

WHOOPING COUGH.

The disease is not compulsorily notifiable but like measles most of the cases occurring are brought to the notice of the Department for the reasons already stated. Fluctuation in the numbers occurring during prevalence are not so great as is the case with measles. 1,703 cases were recorded in 1948, most of them occurring in the last two or three months and this prevalence continued throughout the early months of 1949.

The age incidence of the cases is more or less similar to that for measles, with the largest number of cases occurring in the fourth or fifth year. Female cases slightly predominated.

As the numbers of cases included within the calendar year represent only the beginning of an outbreak the figures for municipal wards do not indicate which area of the city will be most heavily infected, for the prevalence usually spreads from one district to another contiguous district, especially during winter time. The disease was most prevalent in Provan with 146 cases, followed by Ruchill, 107, and Shettleston and Tollcross and Partick West were also somewhat heavily infected. The danger arises when weather conditions are severe for then complications are frequent, especially pneumonia and other respiratory diseases which often prove fatal. The winter of 1948-49, however, was relatively mild so that the mortality from the disease has not been heavy. There were only 7 deaths from whooping cough in 1948.

Of the total cases registered, 138 were removed for treatment in fever hospitals as stated in Appendix Table XV. The seasonal incidence is given in Appendix Table XVI.

CHICKENPOX.

Chickenpox maintains a steady heavy incidence from year to year and throughout each year, but its incidence is usually accentuated in the first month or two. This time incidentally is usually the period when outbreaks of smallpox occur and therein lies danger because of the possibility of mild cases being mistaken for chickenpox.

In 1948 there were 6,876 cases of chickenpox registered compared with 5,553 during the previous year. This is the highest number since 1944. More than half the total cases occurred during the three months of Spring. The heaviest incidence was during the early school ages, 5-10 years. The disease, as usual, was widely prevalent throughout the wards of the city.

The disease is of little consequence for there is no mortality from it, but its occurrence interrupts school attendance and the removal of cases to hospital takes up valuable bed accommodation. During the year 218 cases were admitted to fever hospitals.

DIARRHOEA AND ENTERITIS.

Mortality from diarrhoea and enteritis in the first year of life is now greater than the total deaths from all other infectious diseases of infant life including pneumonia, itself a very heavy cause of loss of child life. In the Report for 1947 it was shown that deaths from this cause formed a very high proportion of the infant mortality in a number of wards in the city—in some instances up to 50 per cent. of the total.

During 1948 there were only 250 deaths, a record low minimum. 242 of these were in children under 1 year, giving a figure of 11 per 1,000 births. The table shows that, as usual, male deaths exceed the female and in some years almost double the number of females.

	Males		Females		Total	—1 year
	—1 year	—2 years	—1 year	—2 years		Per thousand births.
1944	400	18	270	16	670	30
1945	225	16	138	6	363	12
1946	166	6	117	6	283	12
1947	339	5	221	9	574	22
1948	156	5	86	3	250	11

As has been stated before, much of this mortality results from improper feeding of infants, and this is again evident in the figures for infant deaths given in Table XII in the Appendix which shows that most of the fatalities took place before the sixth month. Relatively few deaths occur among babies who are breast fed until the usual weaning period.

In earlier years there was a very definite correlation between mortality and high autumn temperatures when horse traffic was universal and stables were situated throughout the city. Middens were then built in every backcourt and these were usually full or overflowing before they were emptied ; housing conditions were bad and the milk supply often dangerous. The fly nuisance was then a menace.

Although these conditions have been more or less eliminated with the consequent reduction in the mortality from diarrhoeal diseases, the following table is again inserted to show the present-day relationship of temperature to enteritic mortality :—

NUMBER OF DEATHS UNDER 1 YEAR ACCORDING TO MONTH OF DEATH.

	1948.		1947.			1948.		1947.	
	Deaths.	Temp.	Deaths.	Temp.		Deaths.	Temp.	Deaths.	Temp.
January	27	36·8	31	35·3	July ...	17	59·3	54	59·4
February	22	39·4	45	28·6	August ...	28	56·7	58	64·3
March	32	44·9	34	33·1	September	15	53·9	75	54·7
April	17	46·8	47	44·6	October ...	12	48·2	50	50·1
May	31	51·5	45	52·3	November	13	43·8	38	41·9
June	10	55·1	48	56·6	December	18	40·3	30	39·0

In view of the heavy mortality during 1947 it was thought advisable to issue a circular letter to householders directing their attention to some of the possible causes of infantile diarrhoea. The following leaflet was distributed by inspectors and health visitors.

30*th June*, 1948.

I know you are always anxious to do all you can to keep your children healthy and strong.

During recent years there has unfortunately been a great number of deaths among young children from gastro-enteritis. The area in which you reside has been one of those most affected, and I should appreciate your help in trying to stamp out this disease. Among the causes of the spread of the disease are flies, unclean food, and dirty feeding utensils. Your co-operation will go a long way towards safeguarding your own and your neighbours' children, and would be of the greatest possible help. I am well aware that the housing conditions of many of you are far from what they should be. This is part of the price we paid for the war, but meantime we can make the best of what we have.

I am confident you will wish to play your part in the fight against gastro-enteritis, and you **can** *play a very important part by observing the following simple rules* :—

(1) *Kill every fly you see in your home.*

(2) *Keep food, especially milk, covered to prevent flies getting at it.*

(3) *Keep feeding utensils scrupulously clean, especially babies' feeding bottles.*

(4) *Put waste food in the swill bin provided.*

(5) *Put other refuse in the ashbin ; don't spill it about the back court.*

If you do these things you will help to prevent tragedy coming into your own home, and you will also help to improve the health of this great city.

Infective Jaundice.—Two cases of infective jaundice, one of which terminated fatally, occurred during the year.

A 46 year old sewerman became ill at his work on the 7th October. He complained of headache, feverishness and sickness and vomitus contained blood. On the 11th October he was admitted to hospital as a case of pneumonia and septicaemia and his condition deteriorating the diagnosis was altered to one of Weil's Disease. He died on 14th October.

As he had no cuts or sores on his hands and there was no evidence of rats and mice in his home it seems likely that he contracted the disease in the course of his employment.

A 16 year old youth who had been employed, for the previous three weeks only, in cutting off the fins of fish at a stall in the Fish Market became ill on 1st October with sickness and diarrhoea. He was admitted to hospital on the 9th October when epistaxis occurred and he became semi-conscious and comatose. The epistaxis occurred repeatedly for several days. The Schuffner Test was positive 1/1000 for L. icterohaemorrhagica and 1/3000 for L. canicola on 13th October. Recovery began on the 21st.

The stall at which he was employed was located under a railway arch and used mainly as a store although some gutting of fish was done there. There was evidence of rat infestation and as his home was free of rats and mice and his relatives in good health it may be concluded that he too had contracted the disease at his work.

Glandular Fever.—Three cases which all proved to be suffering from glandular fever were admitted to Knightswood Infectious Diseases Hospital during the year. One was notified as enteric fever and the other two as diphtheria.

Case No. 1 : *W. M., 24 years, D. Road, G/R.,* sickened on 10th January, complaining of feverishness and slight cough. On 17th January glandular enlargement in the neck, axillae and groins was observed. He was admitted to Knightswood on 25th January as enteric fever and dismissed on 19th February, altered diagnosis glandular fever confirmed serologically and by biopsy. This boy resided in a four-apartment Corporation house with his father, 62 years, a sheet metal worker, and his mother, 58 years. The house had an internal w.c. and was kept in a clean condition. The patient was employed in the A. M. Works, as a draughtsman in the Jig and Tool Section. No evidence of any association with any missed or suspected cases was found when the works were visited, nor was there any suspicious contact known among his close companions or visitors to his home.

He attended evening classes in mechanical engineering at the Royal Technical College and went to the cinema once weekly and to dance halls occasionally.

Case No. 2 : *F. McL., 26 years, M. Road, Main Door,* sickened on 13th February, with sore throat, feverishness and headache. On 15th February swellings in the neck were observed and he was admitted to Knightswood Fever Hospital certified as diphtheria. The diagnosis of glandular fever was confirmed serologically—Paul Bunnell test positive. This patient resided in a six-apartment house with his father, mother and sister. All home contacts were well. He was employed in the A. M. Works, in the Records Office, but there was no association between this Department of the Works and that in which case No. 1 was employed. All other members of the records staff were well, apart from three rather elderly men who were off—one with a heart condition, one with pneumonia, and the third with influenza and bronchitis.

This patient went to the cinema once weekly and played badminton at various church halls. All his close companions and visitors to his house were in good health and no known source of his infection was found.

Case No. 3: W. T., 16 years, L. Place, 1/R., sickened on 2nd February, complaining of sore throat and stiffness of the neck. He was admitted to Knightswood Fever Hospital on 3rd February as a case of diphtheria, but Paul Bunnel was reported positive for glandular fever. Glands in his neck became enlarged about ten days after his admission to hospital about the same time as he had a slight serum reaction. This boy was a war orphan and resided in a three-apartment house with his grandmother. He attended H. Secondary School, Class IVA, and was last at school on 1st February. All other members of his class were well and no source of the infection was found there. His relatives know of no source for his infection.

Scabies.—The steady decline in the incidence of scabies throughout the city has been continued during 1948. The total number of infected families brought to the notice of the Department during the year was 1,304 compared with 2,306 during 1947, and the total number of new cases treated was 2,116 compared with 4,055 in 1947.

These families and cases had the following distribution throughout the city :—

Division.	No. of infected Families.	No. of Cases from infected Families.
Central	181	341
Northern	399	669
Eastern	163	288
South Eastern	227	377
South Western	234	441
Total	1,304	2,116

The trend of the incidence of scabies in the city since 1943, when the disease was very prevalent throughout the country, is shown by the following table :—

Year.	No. of Families Affected.	New Cases in these Families.
1943	10,441	21,218
1944	7,983	15,528
1945	5,888	12,093
1946	2,862	7,487
1947	2,306	4,055
1948	1,304	2,116

There are two centres for the treatment of adults and children of pre-school age, one at Baird Street Auxiliary Hospital and the other at Moffat Street Reception House. There are in addition two school clinics with bathing facilities for the treatment of school children, whereas last year five such school clinics were necessary.

A small staff of health visitors are still engaged on the follow-up of families and has contributed largely to the reduction of the number of cases.

It is still advisable to maintain facilities for the treatment of the disease on a small scale because it is not possible to give a definite forecast regarding any future epidemic spread. At present the disease can hardly be regarded as a social or public health problem in the city.

Rabies.—No case of rabies is known to have occurred, but a number of persons bitten by dogs were reported by the police for inquiry. These are shown in relation to the season of occurrence and the severity of the bite :—

	Slight.	Serious.
1st Quarter ...	58	2
2nd Quarter ...	87	3
3rd Quarter ...	98	4
4th Quarter ...	54	1
	297	10

307

1946 ... 337 ; 1945 ... 291 ; 1944 ... 287

Trachoma.—The number of cases of trachoma notified during the year was 4 compared with 1 during the preceding year. During the year 9 cases were removed from the register, 7 gone, no address ; died, 2. The number now on the register of this more or less chronic disease is 116 and there is 1 other doubtful case, making a total of 117.

The clinic at which an eye specialist attends is held on Thursdays while on three other occasions during the week a nurse carries out the treatment prescribed. During 1948 patients who attended numbered 102, while subsequent attendances numbered 1,677, of which 392 were consultations with the ophthalmic surgeon and 1,185 for treatment by the nurse. Of the 102 patients attending the clinic, 6 resided beyond the boundary.

With regard to hospital treatment, it was found necessary to remove 2 cases to Stobhill Hospital.

RESPIRATORY DISEASES.

In the Report for 1945 there was published a chart of the death rates from the various forms of respiratory diseases. The reduction in the mortality from pneumonia since 1930 has been rapid—from an average of about 1,500 per million of the population, with peak rates exceeding 2,000 for two or three years, the rate has reached the record low level of 444 per million of the population. This reduction is of more than general interest in view of the fact that the number of births was above the average of the past twenty years, while the gradual ageing of the population both tend to contribute to higher mortality from the disease for pneumonia takes a very heavy toll of the very young and the very old.

Similar observations apply to bronchitis. In 1948 the mortality was also the lowest on record, the death rate per million being 221 compared with 351 for the previous year ; in fact, the death rates from bronchitis have not hitherto been below the 300 mark.

The climatic conditions—a mild winter and a cold summer (the rainfall was the heaviest on record) favourably affected the mortality from influenza for the death rate, 33 per million, is less than half the rate for the previous year. The oscillations of the influenza death rate recently have been less marked than during the previous 20-25 years. Other forms of fatal respiratory disease are represented by a death rate of 126, thus making the total death rate for all forms, 824, the lowest ever recorded. Comparison of those rates with previous years is given in the following summary :—

	1948.	1947.	1946.	1945.	1944.	1943.
Influenza ...	33	74	149	44	75	196
Pneumonia	444	665	661	529	696	840
Bronchitis ...	221	351	320	324	312	306
Others ...	126	131	142	91	118	143
	824	1,221	1,272	988	1,201	1,485

The sex and age distribution of the deaths from those diseases are given in Appendix Table IX.

The seasonal distribution of the cases of acute primary and influenzal pneumonia is given in Appendix Table XVI and the number treated in hospitals in Appendix Table XV. Of the 4,723 cases of acute primary pneumonia registered during the year, 2,208 were removed to fever hospitals and 1,350 admitted to other institutions. The corresponding figures for influenzal pneumonia were 35, 8 and 6.

TUBERCULOSIS.

The incidence of pulmonary tuberculosis remained high throughout the year, altogether 2,775 cases being recorded, 1,399 males and 1,376 females. The following summary shows the numbers of cases occurring annually since 1935 :—

	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	All Tuberculosis
Average 1935-39 ...	1,650	657	2,307
1940	1,908	669	2,577
1941	2,066	661	2,727
1942	2,324	714	3,308
1943	2,778	735	3,513
1944	2,758	671	3,429
1945	2,641	555	3,196
1946	2,809	508	3,317
1947	2,765	512	3,277
1948	2,775	373	3,148

The total of pulmonary cases shows to what an extent the number of notified cases has increased over the pre-war average and how this high incidence is being maintained.

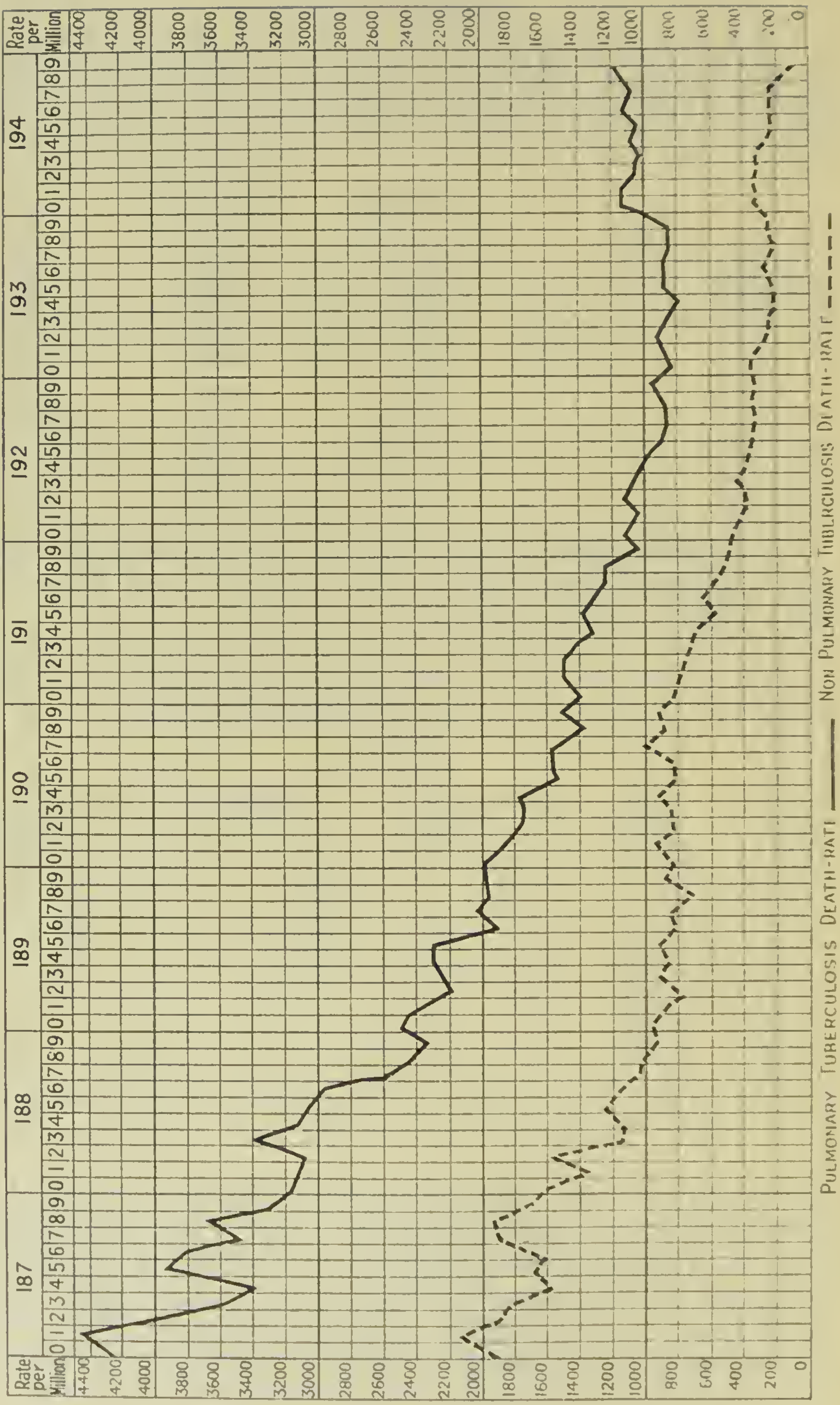
The age and sex of the cases of pulmonary tuberculosis notified during the year is given in the following summary :—

1948 *Cases.*

Age	Pulmonary Tuberculosis						Non-Pulmonary Tuberculosis						
	Males			Females			Males				Females		
(Years)	S.	M.	W.	S.	M.	W.	S.	M.	W.	N.S.	S.	M.	W.
— 5	103	—	—	84	—	—	45	—	—	—	37	—	—
—15	163	—	—	162	—	—	56	—	—	—	62	—	—
—25	291	33	—	467	127	—	34	3	—	—	38	7	—
—35	108	114	4	93	231	4	10	12	—	1	9	13	—
—45	48	139	2	21	97	3	2	5	—	—	3	6	—
—55	39	141	7	9	34	7	2	6	1	—	—	2	—
—65	37	102	6	4	16	3	3	2	—	—	3	3	—
+65	17	29	16	3	5	6	1	3	1	—	1	1	1
	806	558	35	843	510	23	153	31	2	1	153	32	1

This table again shows the considerable excess of cases among females between 15 and 35 years of age. The total for the age group 15-25 years for females was 594 and in the following age period, 328, compared with the respective numbers for males of 324 and 226. Thereafter the male cases are considerably in excess of the females in each age group ; and during the period 55-65 years only 23 female cases were notified compared with 145 males.

TUBERCULOSIS : CHART SHOWING DEATH-RATES PER MILLION
GLASGOW – 1870 TO 1948



The rise in the incidence of the disease during the recent world war is relatively greater than that which occurred during the first world war and this is illustrated in the chart on the opposite page which shows the death rate per million from pulmonary and non-pulmonary forms of the disease.

The problem is aggravated by the present shortage of housing accommodation and the lack of hospital beds owing to the difficulty of obtaining nursing staff. In addition to these difficulties, there is the overcrowding of many households, especially serious when the parent is the patient. The following statement shows the numbers of adults and children in the households with notified cases of pulmonary tuberculosis during the year, according to size of house :—

	Size of House (Apartments).				
Number of Inmates.	1	2	3	4	5+
	Pul.	Pul.	Pul.	Pul.	Pul.
1 or 2 adults and no children...	142	107	50	16	5
,, ,, 1 child ...	107	68	32	4	1
,, ,, 2 children ...	67	68	29	6	3
,, ,, 3 ,, ...	26	34	6	3	1
,, ,, 4 ,, ...	10	11	4	—	1
,, ,, 5+ ,, ...	3	14	5	5	—
3 adults and no children ...	22	125	79	26	15
,, 1, 2, 3 children or more	20	111	62	21	6
4 adults and no children ...	16	109	99	45	20
,, 1, 2, 3 children or more	27	111	71	36	9
5 adults and no children ...	3	48	69	45	12
,, 1, 2, 3 children or more	13	63	69	7	4
5+ adults and no children ...	2	46	54	71	27
,, ,, 1, 2, 3 children or more ...	4	71	76	74	27

In order to appreciate the significance of these figures it is necessary to multiply them by 4 for the total number of cases remaining on the register for the city is 10,169.

The following summary gives some idea—but probably only an indication—of the spread of infection by close contact according to whether the sputum was positive or otherwise. It should be remembered, however, that probably sputum in not more than fifty per cent. of the cases is examined.

CONTACT AND DEGREE.

		Pul.	Non-Pul.
No contact		2,269	325
Living or had lived in same house with case of—			
T.B.+	At time of sickening	130	8
	Within 5 years	78	5
	More than 5 years before	32	1
T.B.—	At time of sickening	123	13
	Within 5 years	62	9
	More than 5 years before	37	4
Non-Pul.	At time of sickening	20	5
	Within 5 years	13	2
	More than 5 years before	11	1
	Totals	2,775	373

During the past thirty years it has been the practice, where possible, to endeavour to segregate cases of pulmonary tuberculosis from other members of the family by providing bedsteads and bedding, but owing to the fact that nearly two-thirds of the population of the city reside in houses of one and two apartments this method of alleviating the home conditions is difficult. In latter years arrangements were made for erecting chalets but hitherto this could only be done on a very limited scale for most of the houses have been in tenement property of four storeys where it is quite impossible to make use of this form of isolation. The Corporation, however, has given a relatively high priority to rehousing of families where cases occur but up till the present it has only been possible to make this provision for overcrowded families. During the year 326 houses have been allocated because of these conditions.

The following summary indicates the sleeping accommodation of cases in various size of house and shows how large is the number of those who have to sleep in the same bed with other members of the family :—

SIZE OF HOUSE (APARTMENTS).

	1		2		3		4		5	
	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.
Pulmonary—										
Room to self	58	—	222	1	333	17	226	4	93	1
Bed to self ...	50	40	133	39	67	28	34	12	12	3
Others in same bed ...	253	61	488	103	226	34	102	11	20	2
Non-Pulmonary—										
Room to self	5	—	15	1	18	4	19	4	6	3
Bed to self ...	3	9	11	21	7	13	5	1	2	—
Others in same bed ...	26	20	64	47	29	14	9	5	4	—

The statement given on the following page shows the number of pulmonary and non-pulmonary forms of the disease notified in each of the former municipal wards of the city, according to sex.

In view of the difficulty of obtaining nursing staff, specially for tuberculosis cases, the number of patients suffering from tuberculosis which should have been removed to hospitals and sanatoria is much less than was necessary, both from the point of view of early treatment on the one hand and the isolation of patients who are a source of infection on the other. The Tuberculosis Officers, however, have made every endeavour to provide early treatment for cases even if treatment has to be commenced at home.

Cases under treatment in sanatoria or other institutions during the year are given in the following table :—

NUMBER OF PATIENTS.

	In Institutions on January 1	Admitted during the year	Discharged during the year	Died in Institutions	In Institutions on December 31
Respiratory—					
Adults—					
Males	449	904	658	224	471
Females ...	610	1,171	991	202	588
Children—					
Males	82	159	133	8	100
Females ...	86	177	143	18	102
Non-Respiratory—					
Adults—					
Males	67	174	139	10	92
Females ...	94	138	124	7	101
Children—					
Males	137	193	170	12	148
Females ...	121	180	153	5	143
Total ...	1,646	3,096	2,511	486	1,745

GLASGOW.—CASES OF TUBERCULOSIS NOTIFIED IN EACH MUNICIPAL WARD (OLD DISTRICTS) DURING 1948.

Ward	*Pulmonary Tuberculosis*		*Non-Pulmonary Tuberculosis*							
	Males	Females	Abdomen		Meninges		Bones		Others	
			M.	F.	M.	F.	M.	F.	M.	F.
Shettleston and Tollcross ...	59	58	1	—	2	5	9	2	2	2
Parkhead ...	48	60	1	6	—	2	2	3	—	2
Dalmarnock ...	34	41	—	—	—	2	—	2	2	3
Calton ...	27	36	—	—	3	—	—	1	3	—
Mile-end ...	28	22	—	—	1	1	1	2	—	—
Whitevale ...	24	27	—	—	—	1	2	—	1	1
Dennistoun ...	26	22	1	1	—	—	—	2	—	—
Provan ...	62	67	1	2	2	—	10	4	3	3
Cowlairs ...	27	27	1	—	—	1	3	2	1	—
Springburn ...	25	38	—	2	1	1	4	2	—	1
Townhead ...	37	31	—	—	2	1	2	2	1	1
Exchange ...	15	11	—	1	1	1	1	—	1	—
Blythswood ...	16	14	—	—	1	1	1	—	1	—
Anderston ...	31	31	—	—	1	1	4	1	2	—
Sandyford ...	28	17	—	1	1	—	1	—	1	2
Park	16	16	—	—	—	1	1	1	2	—
Cowcaddens ...	34	48	—	1	1	2	5	2	2	3
Woodside ...	40	33	2	—	1	—	1	2	2	1
Ruchill ...	74	85	1	2	3	—	3	9	4	3
North Kelvin	20	15	—	1	—	1	1	2	1	—
Maryhill ...	37	41	—	1	1	2	1	—	—	—
Kelvinside ...	29	12	—	—	—	1	1	1	1	—
Partick East	31	31	1	—	1	3	—	1	1	1
Partick West	22	14	—	3	—	—	—	—	1	2
Whiteinch ...	42	33	1	—	3	2	2	1	2	1
Hutchesontown	45	58	1	3	—	1	1	1	—	2
Gorbals ...	71	78	—	—	2	—	5	2	3	3
Kingston ...	30	36	2	—	1	3	1	—	1	1
Kinning Park	31	51	—	4	2	2	—	3	2	1
Govan ...	69	56	—	2	1	5	3	2	3	1
Fairfield ...	33	30	1	—	—	—	—	3	—	—
Pollokshields	63	62	1	3	2	1	1	4	2	—
Camphill ...	17	9	—	—	2	—	1	—	—	1
Pollokshaws ...	39	37	1	—	1	—	—	1	—	1
Govanhill ...	13	28	—	2	1	4	2	1	3	2
Langside ...	19	8	—	—	1	—	—	1	—	—
Cathcart ...	18	16	1	—	2	—	1	3	—	—
Yoker and Knightswood	52	53	2	—	2	—	4	1	1	1
Institutions ...	66	24	—	—	—	—	1	1	2	2
Harbour ...	1	—	—	—	—	—	—	—	—	—
Totals ...	1,399	1,376	19	35	42	45	75	65	51	41

NOTE.—*The districts refer to the former municipal wards of the City.*

Many of the problems of the disease were made the subject of a special study based on the cases occurring in the east end of the city and are here described in summarised form from the more detailed enquiry carried out some years ago.*

---

* Modern Methods of Prevention and Treatment of Tuberculosis, by Dr. Stuart I. A. Laidlaw, Medical Officer of Health, Glasgow.

Modern Methods of Prevention and Treatment of Tuberculosis

HISTORICAL.—Tuberculous disease is probably as old as the vertebrates, and evidence of bone tuberculosis has been found in Neolithic man (7000-3000 B.C.). It is mentioned in Babylonian records, and the mummy of an Egyptian priest of Ammon of about 1000 B.C. exhibits tuberculosis of the spine. The Greek philosopher Hippocrates, the Father of Medicine, writing in the fifth century before Christ, gave the first good description of the disease. He used the term " phthisis " for the wasting or emaciation which overtakes the sufferer. The more modern word " tuberculosis " dates back no further than the seventeenth century when Sylvius first described as " tubercles " certain nodules which he observed in post-mortem material. He noticed them in the lungs and held that in them phthisis not infrequently had its origin. He believed that they broke down and gave rise to cavities. The extent to which the scourge of tuberculosis has ravaged the world can be appreciated if it is recalled that at the end of last century it was estimated that this disease caused over one-seventh of all deaths in Europe. It has well earned its popular name " consumption "—the disease which consumes its victim. The cause of tuberculosis was not discovered until 1882, when Robert Koch isolated the tubercle bacillus.

Tuberculosis is world-wide in its incidence, among all races and peoples, though some climates are more favourable for recovery than others. The climate of the Alps with its sunshine and cool air is famed for the cure of surgical tuberculosis and is also beneficial in early cases of phthisis where the disease is localised and the prospects of recovery good. The prevalence of tuberculosis differs widely from country to country ; for instance, it is higher in France than in New Zealand, higher in Scotland than in England. It is generally low in country districts and higher in the towns, and especially high in congested areas. The disease may occur at any age and is, particularly in its pulmonary forms, more frequent in males. It is practically unknown for a child to be born with tuberculosis, though a few instances have been recorded of tubercular mothers giving birth to children with tubercular lesions.

CAUSATION AND SPREAD OF TUBERCULOSIS—HUMAN AND BOVINE.—This disease is caused by by a minute germ known as the tubercle bacillus, which is so small that it can be seen only with the aid of a microscope. It is enclosed in a waxy sheath, and is strongly resistant to attack. There are two main varieties of the germ, the human type and the bovine type. Infection by the human type is conveyed principally in the sputum of sufferers from open pulmonary tuberculosis, and it is either directly spray-borne in coughing or talking, or inhaled dry in the dust of the air. Infection by the bovine bacillus originates almost exclusively from cows' milk containing tubercle bacilli; effective meat inspection prevents the flesh of tubercular cattle being a danger to the public in this respect. The disease may affect any part of the body, but the lungs, meninges, bones and joints and lymph glands are most frequently attacked. Tubercular skin lesions are not numerous or dangerous to life, and are usually curable.

Infection alone does not necessarily cause disease. Two factors always contribute to its occurrence—first, the infection from a carrier of the disease, either human or bovine; and second, the quality of the resistance of the individual. For example, primitive races have no inherited immunity, and the immunity of scattered rural populations such as we find in the Highlands, Ireland and Scandinavia is low. These people are much more prone to develop a severe type of tuberculosis when moved from their environment. This fact was particularly noticeable during the last war among Norwegians from Stavanger and the Far North, who arrived in large numbers in our cities, when soon a very high incidence of active tuberculosis developed among them. Then again, resistance to infection may be lowered by many factors, such as debility after illness, especially measles and whooping cough in young children, overwork, overcrowding, undernourishment, and ill-spent leisure. Thus both the causative organism and a susceptible individual are required before active lesions develop.

PREVALENCE OF TUBERCULOSIS AND REASONS FOR THE PRESENT HIGH INCIDENCE IN GLASGOW.—Tuberculosis for long held the pre-eminent title of the chief killing disease in Scotland, but in recent years, due to the ageing of our population, it has been superseded by heart disease, cancer and cerebral haemorrhage. But though this is true of the nation as a whole, tuberculosis still remains the main killer of youth in its prime, of the young man or woman at the beginning of adult life when, for the first time, he or she is beginning to serve a useful purpose in the community. In the age group of 15-40 years, one-third of all deaths are attributable to this cause. Statistics of death have only been recorded since 1861, but it was found that up to the end of the 19th century the deaths from tuberculosis in Scotland averaged over 10,000 per annum. At the turn of the century, a decline in the mortality rate set in, and with the exception of the 1914-18 period there was a steady fall in the figures up to the beginning of the recent war, when the average was some 4,000 deaths per annum. The war caused a rise in both the incidence of and mortality from tuberculosis, and in 1946 it was found that the new cases recorded were at least 50 per cent. in excess of the pre-war average, while the deaths exceeded the 1940 figure by over 16 per cent.

This trend has continued through 1947 and 1948 and is still continuing, causing profound and widespread anxiety. Along with this rise has come a shortage of nurses, and endeavours have had to be made to fill the gaps by part-time nursing schemes. The position in Glasgow, handicapped as it is by an acute housing shortage much worse than in the average English city, is very serious indeed. The effect of gross overcrowding is shown by the fact that the city, with a population of one-fifth of the total population of Scotland, contributes one-third of the total deaths. The city has no less than 12,000 notified cases on its register, of which 10,000 are pulmonary and therefore a source of infection to others. A further contributory factor to the high incidence is the inability to obtain sufficient hospital accommodation, which results in the retention of numerous highly infectious people at home.

Milk as a source of infection has been steadily declining for the past twenty years. This is very evident when the notification figures are examined, as it is found that while the rate for pulmonary tuberculosis has been steadily rising since the beginning of the war, the number of cases of surgical tuberculosis (the majority of which are caused by the bovine bacillus) has continued to fall.

TUBERCULOSIS SCHEMES.—Prior to 1939, tuberculosis schemes had no fixed standard, and various areas vied with one another to produce the best scheme in the country. Three good schemes were known, namely, the King Edward VII Welsh National Memorial Association's, that of the Administrative County of Lancaster, and the arrangements made in Glasgow. The fundamental requirement of every tuberculosis scheme is notification. Under the Notification of Infectious Diseases Act, 1889, practitioners are required to notify all cases of tuberculosis which occur in their practices. This does not apply merely to general practitioners but to medical officers employed everywhere, whether in hospital or in clinic service. These notifications are sent to the Medical Officer of Health for the burgh or county, who has them recorded. A record of each notification is passed to each tuberculosis officer, who sends a health visitor to the patient's house. She ascertains whether the sufferer is fit to attend the local tuberculosis clinic or whether a domiciliary visit will be required from the tuberculosis officer. By these means, every case of tuberculosis should become known to the health authorities, and moreover should obtain examination and treatment. In addition, the home circumstances of each case are reported upon by the health visitor and carefully recorded on the patient's case-sheet. The tuberculosis scheme, therefore, embraces not only the tuberculosis officers and health visitors, but record clerks, dispensers, clinics, and wards in hospitals and sanatoria.

TUBERCULOSIS—PREVENTION AND TREATMENT.—Tuberculosis is conveniently divided into three groups—(*a*) Pulmonary Tuberculosis; (*b*) Tubercular Meningitis; and (*c*) Surgical Tuberculosis.

(*a*) *Pulmonary Tuberculosis.*—Under this heading are included all cases where infection is primarily in the lungs. They form by far the largest group and so occupy most of the available accommodation in hospitals and sanatoria. They are also the most dangerous group from the point of view of spread of infection. Sometimes the disease assumes a fulminating form, either as miliary tuberculosis or as acute broncho-pneumonic tuberculosis (galloping consumption), but fortunately in the large majority of cases it is not so acute. The treatment was, for long, isolation in bed, a good diet and fresh air, but to-day we have added a variety of surgical procedures and chemotherapy. In those institutions where more active treatment is given, a relatively larger number of nurses is required, and the present staffing difficulties are largely attributable to this increased requirement, together with the shorter working week, and the great dearth of nursing recruits.

It is evident that the chief problem which confronts the present tuberculosis service is the constant addition of large numbers of freshly infected patients, and any method which can be devised to reduce this number will begin to ease the tremendous burden on the service. What methods are at present at our disposal? The first is obviously isolation of the patient. This is, of course, much better done in hospital than at home, but where vacancies in hospital are few and the demands are heavy the best use must be made of isolation in the home. Sometimes the house is of insufficient size to make it possible for the patient to have a separate bed and room, and here the assistance of the health visitor is invaluable in advising the family on matters of hygiene, *e.g.*, methods of disposal of sputum, proper disinfection of eating and drinking utensils ; and on the exclusion of younger members of the family. Patients who have had a spell of routine hospital treatment are easier to deal with, as they have been educated in these matters while undergoing treatment. In Glasgow with its great housing shortage, proper isolation is seldom possible unless the local authority succeeds in rehousing the family in better surroundings.

These methods are calculated to diminish the number of contact cases arising in the home, and the next step is to ensure that persons who sicken are detected before the condition is far advanced. This has several advantages—(1) the cases are more easily cured ; (2) a smaller percentage are infectious to others while in the early stage ; (3) the duration of treatment in hospital or sanatorium is less ; (4) the length of time elapsing before return to work is considerably reduced ; and (5) the recovery rate is much higher.

MASS RADIOGRAPHY.—With the rapid advance made in the technique of X-ray examination, this method of detection of lung abnormalities has been coming more and more to the fore. In the early days of the century the physician had to rely principally on his clinical skill in physical examination aided by the stethoscope. Twenty-five years ago X-ray films of the chest were not of high quality, but with the advance in radiological technique and improved apparatus the X-ray plate of to-day is one of the most useful adjuncts to diagnosis. Patients are being sent for X-ray examination to the chest clinics in ever increasing numbers, and the public has undoubtedly become X-ray minded. X-ray examination has been made compulsory for entry to the services ; it is included as a condition of entry to many superannuation and life insurance schemes ; and many governments, including our own, have established mass radiography units in an endeavour to detect the disease in its early and curable stages.

X-ray examination of large numbers of an apparently healthy population by the taking of full-sized films is wasteful and expensive, and it was for these reasons that experiments were first made in the development of mass radiography apparatus. The underlying principle is the photographing of the fluorescent screen image, to obtain thereby a series of miniature films which can be projected and magnified on a screen.

Mass radiography is undoubtedly one of the greatest advances in the field of preventive medicine. Hitherto medical examination on a large scale had been available only to sick persons, but mass radiography permitted the first extensive examination of apparently healthy individuals in Britain. It was first employed on a large scale in Brazil in 1936, and the method was so successful that, following the outbreak of war, the British Empire and the U.S.A. decided that its application would be invaluable in the examination of large groups of apparently healthy men and women being recruited to the Forces.

In 1942 the Committee on Tuberculosis in Wartime, set up by the Medical Research Council at the request of the Ministry of Health, recommended the extension of the routine use of mass radiography to civilians. Special sets were designed and produced in accordance with the specifications approved by the Committee's experts, and it is very much to the credit of the Ministry that they insisted that sets distributed throughout Britain for this purpose should be of a standard type so that comparable results could be obtained from the various centres. The first mass radiography set to be allocated to Scotland was set up in Glasgow in 1944. In 1948 the Glasgow Public Health Department acquired a second set with a mobile dark room van and power generating unit.

When the scheme was inaugurated it was realised that detection of the disease was of little value without the provision of suitable treatment, and beds were allocated in Ruchill and Robroyston Hospitals for this purpose. While the primary object is the detection of tuberculosis, other chest and cardiac conditions are revealed and dealt with. The centre is in close liaison with the thoracic surgical unit at Mearnskirk Hospital, and a consultant cardiologist was appointed for the assessment of heart abnormalities. Glasgow was a pioneer in the application of mass radiography as part of the routine school medical examination, and some 15,000 children, aged 13 and 14 years, are X-rayed annually.

Although mass radiography was first introduced into the Forces to detect cases of gross disease, we in Glasgow early appreciated that to confine its application to such cases would result in the loss of much valuable information on the incidence and development of pulmonary tuberculosis. Much attention, therefore, has been devoted to the study of minimal lesions, and by advice and continued close observation every endeavour has been made to prevent the breakdown of persons with early infection. This plan has necessitated retention on the register of the unit of a large number of observation cases. It has been found that the majority of individuals in this category are agreeable to continue their connection with the unit rather than to be referred to the busy tuberculosis dispensaries.

As an indication of the large numbers with which a mass radiography unit can deal, records show that from the date of opening of the Glasgow unit in 1944 until December, 1948, a total of 140,000 persons were X-rayed. In addition to the examination of school children already mentioned, the unit has carried out surveys of students from the University, Technical College, Commercial College, Veterinary and Domestic Science Colleges and Jordanhill Training School. Examinations have been made of persons engaged in both light and heavy industries, in the distributive trades and in clerical work. The Glasgow Police Force have included mass radiography examination in their conditions of service, and the Governments of Canada, Australia, New Zealand, South Africa, and U.S.A. all utilise the unit for the examination of emigrants.

On an average, six persons per thousand examined are found to be suffering from active unsuspected tuberculosis, the proportion of females being slightly greater than males (females 7, males 5). Approximately half those so detected have been admitted to hospital for treatment, the remainder being treated at home and kept under observation. The necessity for keeping this proportion at home has been brought about by the shortage of hospital accommodation, and has added considerably to the work of the unit. Since 1944 the unit has detected nearly a thousand active cases among apparently healthy persons, while a further two thousand persons with apparently inactive lesions, of whom some four hundred subsequently required hospital treatment, required to be kept under observation. Thus fourteen hundred out of the total number needed treatment, or one per cent. of all those examined.

In addition to these cases of tuberculosis, the unit has performed an extremely valuable service in detecting cases of heart disease and arranging that every one of these should have the advice of the consultant cardiologist, who arranges for electro-cardiogram tracings to be made at Stobhill Hospital. If necessary, the patient is admitted to the wards for further investigation and treatment. Patients with less severe lesions are referred to their own doctors with a copy of the specialist's report. The cardiologist states that many workers supposedly suffering from heart trouble have been reassured that this was not so, and thus much fear and invalidism have been removed by encouraging them to work to their full productive capacity.

Some 1,500 cases of non-tuberculous post-pneumonic conditions of the lungs have been revealed. In addition, a few cases of lung cancer have been detected, and the rarity of this finding can be accounted for by the fact that the majority of the examinations are made in the younger age groups.

It has been suggested that the unit might be utilised for the systematic examination of contacts on a large scale, and arrangements are shortly to be made to allocate one day each month for this purpose. It must be remembered, however, that the sets are designed to take adults, and, as infants require a table and young children cannot be positioned on the stand, the examinations will have to be limited to adults and children of ten years and over.

Psychological Effect of Mass Radiography.—In the industrial field, between 60 and 70 per cent. of employees volunteer for mass radiography, and it is interesting that a registered case of tuberculosis in a factory or warehouse seldom refuses to accompany fellow workers to the unit, no doubt in case he should draw attention to himself. It is most important that the medical officer in charge should be a senior physician with wide experience in dealing with the psychology of patients. A diagnosis of tuberculosis in individuals who feel well causes a considerable mental shock when made, and much time, tact and understanding are therefore required in dealing with this. On the other hand, there are others who, though suffering from malaise and fatigue, force themselves to continue working and who, when informed of their condition, are actually relieved. Strange to relate, some workers who have believed themselves to be suffering from a cardiac condition, when informed to the contrary, are displeased because they no longer qualify for special sympathy and consideration in the matter of easier jobs.

The patients diagnosed at the mass radiography centre who are admitted to hospital are placed in an observation ward. This name has been employed, as it is found that young men and women who do not feel any symptoms have less objection to being admitted to a ward to which the stigma of implied disease is not attached.

TUBERCULOSIS ALLOWANCES.—Towards the end of the recent war the Government introduced a scheme of tuberculosis allowances for pulmonary cases who, it was believed, would be able to return to work after a spell of institutional treatment. The local authority administered the distribution at very little cost (roughly 2½ per cent. of money disbursed). These are the advantages of this scheme :—

(1) Early cases, many of which were revealed by mass radiography, were encouraged to seek treatment.

(2) Basic, rent, dependants' and insurance allowances were granted. The local authority had discretionary powers to grant aid towards hire-purchase or towards the children's school fees.

(3) There was no means test, and patients felt they were not receiving charity or parish money.

(4) Grants were despatched by post every fortnight and no investigators called at patient's house, the recipient signing a declaration every three months that any change in home circumstances had been reported to the Tuberculosis Officer and Allowance Scheme Officer.

(5) If a patient was non-co-operative, the allowance could be stopped, or adjustments made on admission to or dismissal from hospital.

The disadvantages are :—

(1) From single individuals National Health Insurance money was deducted.

(2) Chronic and non-pulmonary cases were not eligible for the allowance.

Since July 5th, 1948, this service has been administered by the National Assistance Board, and still has the disadvantage of excluding chronic and non-pulmonary cases. It has the further disadvantage of applying a means test and of sending investigators to the home.

(*b*) *Tubercular Meningitis.*—The number of cases of tubercular meningitis in a community has long been regarded as an index of the efficacy of preventive measures. Meningitis ensues when the tubercle bacilli infect the fluid which surrounds the brain. The infection is carried by the blood stream, the individual, frequently an infant, having been infected by someone in close relation to him. In fact, every case of tubercular meningitis in childhood should be regarded as a pointer to a dangerous and open case of respiratory tuberculosis among the immediate contacts of the sick infant. This case should at once be sought for and appropriate action taken when it is found. Two factors are always present before disease develops; the individual must come in contact with live tubercle bacilli and his resistance to infection must be low. One of the ways in which this resistance can be undermined is by repeated massive doses of infection. Measures such as segregation and better housing tend to prevent or at least reduce the risk of this. In a small house where an adult suffers from open phthisis with a positive sputum, the risks to young children are very great indeed.

In 1929 the Joint Tuberculosis Council published a report on an enquiry conducted by Lancashire County Borough into this matter. The third conclusion which the report made was that " the death rate from non-pulmonary tuberculosis among children exposed to risk in tuberculous households from an adult with a positive sputum was nine times greater than in the control group of age group 0-1, fourteen times greater than among the controls in age group 1-2, and nineteen times greater than among the controls in age group 2-5, the deaths being mainly due to tuberculous meningitis." These figures were confirmed in the period 1930-35 in the Eastern Division of Glasgow.

Another point worth mentioning is that in the recent survey of tubercular meningitis in Scotland, conducted by the Medical Research Council, in which the Glasgow tuberculosis service took a leading part, 99 out of every 100 specimens of cerebro-spinal fluid submitted for examination from cases of tubercular meningitis in the city were found to contain the human bacillus and only one the bovine bacillus. This underlines the assertion that the infection is coming from contact with human sources and not from milk.

TREATMENT.—Until recently tubercular meningitis was considered incurable, its duration being about three weeks. A few years ago a new drug, streptomycin, was introduced from U.S.A., and since then, when administered to *suitable* cases, has proved curative in 30-40 per cent. of the Glasgow series under test.

Unfortunately, this drug is very toxic and tends to cause a permanent upset of the balancing mechanism of the brain, with consequent serious and permanent instability of locomotion on soft surfaces resembling that of an intoxicated person. Streptomycin has so far proved disappointing in the treatment of other forms of tuberculosis where its administration requires to be more prolonged. In many of these cases, streptomycin-resistant strains of the tubercle bacillus develop after 6-10 weeks. The disadvantage of this misfortune is obvious. Streptomycin, like penicillin, is prepared from one of the moulds, but penicillin is quite useless in the treatment of tubercular meningitis.

It is evident, therefore, that prevention is the essential need, and the methods by which this can be brought about may be briefly summarised under four headings :—

(1) *More adequate Housing for the Family containing the Infectious Case.*— The Housing Committee of Glasgow Corporation instituted a priority scheme for this purpose in 1929. It was arranged that 10 per cent. of relets in houses for the relief of overcrowding were to be given to tuberculous familes, and up to the present time 1,849 tuberculous families have been rehoused under the scheme. During 1948, 300 houses were allocated for this purpose, and it is hoped to raise this number in the present year to 750 owing to the fact that the Secretary of State has allocated 400 additional houses. If we are successful in doing this, it would result in halving our present hospital waiting list.

A matter which will need to be considered is to what extent assistance can be obtained towards the payment of the rent of the new house. It is quite obvious that when a tragedy such as tuberculosis occurs in a household, frequently striking down the breadwinner, it causes deterioration of the financial position at the very time when the family are advised to remove from a house with a modest rent to a new Corporation house at a much higher rent. Experience has shown that even to-day, when the average income is round about £5 per week, a rent of 10s. per week, including rates, is as high as the majority of tuberculous families can afford to pay, and any rent in excess of this sum only results in curtailment of that part of the family income which should be spent on food.

(ii) *Hospitalisation of the Infectious Case.*—It is very difficult to obtain hospital accommodation at present for the more chronic case owing to the shortage of beds, as there is naturally a tendency to devote the available beds to the early and more curable cases.

(iii) *Removal of Young Children from Contact with Infectious Cases in the same Household.*—This is difficult, as relatives are seldom willing to take them for a lengthy period of time, and accommodation in children's homes is very limited and is competed for by children convalescing from many other diseases. It might be considered advisable to include child contacts in the boarding-out scheme for orphan children at present conducted by the Welfare Department.

(iv) *B.C.G. Vaccination as a Means of raising the Resistance of the Susceptible Child to Infection.*—By immunisation is meant the production of an increased resistance against tuberculosis. Immunity against tuberculosis is never absolute, and any resistance produced can always be overcome by severe infection. Civilized races show, in general, some inborn immunity as compared with primitive people. This has come about over the years by the operation of natural selection. Those with little immunity die from the malady before reproducing themselves, and the race is maintained by the progeny of its more resistant members. Contrasted with natural immunity is the acquired immunity gained by the majority of healthy adults. This immunity, which protects us from more serious tuberculosis, is acquired by a primary infection with tubercle bacillus. A lesion occurs in the lung or abdomen, the lymph glands enlarge, but in the vast majority of instances the body overcomes the invader without showing symptoms. This is in effect a vaccination against the disease, which produces immunity.

A simple means of ascertaining if an individual has been infected is by the tuberculin skin test. It is found that positive reactors have increased resistance to renewed infection, while conversely the negative reactors are more susceptible to infection when living and working in a tuberculous environment. This observed fact is the basis of immunisation against tuberculosis, in which negative reactors who are relatively susceptible are converted into positive reactors who are relatively immune.

The natural process of acquiring relative immunity by an accidentally acquired primary infection is hazardous. It is more than hazardous to the infant in a tuberculous household, to the young tuberculin-negative nurse working in a tuberculosis ward where the fullest precautions are not taken. The danger in these cases is that the dose of infection received may be very large, and it is liable to be repeated. The same consideration applies to the drinking of milk containing tubercle bacilli.

We have then to consider if there is any safe way of acquiring immunity, especially for those exposed to infection. In many diseases the injection of dead bacteria can be used to produce immunity. After Koch discovered the tubercle bacillus he made preparations of dead bacilli known as tuberculins, but experience showed that they were useless for this purpose. This was a tremendous disappointment to the whole world, for early hopes had been raised.

In 1922 two French bacteriologists, Calmette and Guérin, produced a strain of the bovine tubercle bacillus which they had cultured and sub-cultured for over 200 generations over a period of thirteen years under slightly unfavourable conditions, with the result that the bacillus eventually became harmless to all animals. It was also observed that the bacillus under careful sub-culture remained constant in its characteristics and did not regain its former virulence.

Careful and prolonged animal experiments showed that it had immunising properties. They called this material B.C.G., and immunisation of human beings was commenced and has now been carried out in some seven million people without ill effect. Over three million children have been vaccinated with it in the last 26 years, principally in Denmark, Norway and Sweden, France, Canada and America. Norway is contemplating making B.C.G. vaccination compulsory to negative reactors. Heimbeck's investigations into this subject in Oslo showed that susceptible nurses working in contact with tuberculosis were seven times as prone to develop the disease as their colleagues who had accepted B.C.G. vaccination.

The British Government are at present considering the introduction of B.C.G. vaccination into this country and there seems little doubt that its use to protect susceptible contacts in the home and susceptible hospital staff would ensure a marked reduction in the number of new cases arising from these sources.

(c) *Surgical Tuberculosis.* — When tuberculosis attacks the bones, joints, glands or skin, we refer to it as surgical tuberculosis. Young children are most prone to this type of infection, which is often bovine in origin. Fewer of these cases are now occurring in Glasgow owing to an improved milk supply. The application of modern orthopaedic technique, artificial sunlight, vitamins and calciferol greatly reduce the necessity for surgical intervention and are yielding gratifying results.

Conclusions.—(*a*) The position in Glasgow with regard to tuberculosis is so serious that the matter will require to be treated as almost of war-emergency significance. This being so, a unified tuberculosis service for the city is a first essential. Prior to July 5th, 1948, such a service existed, but the National Health Service Act divided it between the Local Health Authority dealing with the domiciliary side and the Regional Hospital Board dealing with the clinic and hospital side. The Act permitted the Tuberculosis Officer to act for both authorities, and the health visitor service remained as before, the link between the home and the clinic. In subdividing the city's hospital services among Hospital Management Boards, the tuberculosis hospitals and clinics were placed under several separate Boards. This does not make for ease of administration, and there would be a distinct advantage in placing all infectious disease and tuberculosis hospitals and clinics under one Management Board in Glasgow. Unification of control of the tuberculosis service could then be obtained by the setting up, in conjunction with the Local Health Authority, of a Co-ordinating Committee to which both the Medical Officer of Health and Area Supervising Tuberculosis Officer could be attached.

(*b*) Rehousing of Tuberculous Families.—I have already dealt with this subject in the previous part of the lecture, but my view is that greater priority must be given to this problem as it exists in Glasgow. It seems to me that the best solution would be for the central Government to arrange for an adequate proportion of houses to be allocated for this purpose and assist in the payment of rents where necessary. Only in exceptional circumstances should a tubercular family be asked to pay more than ten shillings per week rent and rates, or the commissariat will suffer.

(*c*) A system should be instituted whereby the unaffected children of overcrowded families in which there is an open case of phthisis could be boarded-out similarly to the orphan children under the Children's Committee arrangement.

(*d*) Serious consideration should be given to the immunisation by B.C.G. vaccine of known susceptible contacts. In my opinion, B.C.G. vaccination should also be available to all susceptible doctors, nurses, students and domestics attached to sanatoria or tuberculosis clinics.

(*e*) The city's milk supply should be 100 per cent. tubercle free (at present it is 95 per cent.).

(*f*) The diet for both patients and nurses requires to be much improved, especially in protein and fats. Dr. Keers, Superintendent of Tor-na-Dee, has drawn attention to this matter in a recent review of cases under his care. He states that the present low protein and fat diet is retarding recovery. The importance of diet was strikingly illustrated by French experience during the last war. From 1939-43 the large cities and the adjacent rural and urban areas were cut off from important sources of food-supply by German occupation. In these areas the tuberculosis death-rate increased by over 60 per cent. of the pre-war figures, whereas in Brittany where the available food was even greater than in peacetime, as it was impossible to export freely, the tuberculosis mortality fell by nearly 40 per cent.

(*g*) Churches of all denominations could materially help if each would undertake to provide hostel accommodation for a number of chronic ambulant infectious cases.

(*h*) An extension of the hostel ward arrangements which have recently been made with Robroyston Hospital should be considered. In this ward patients are accommodated without any junior nursing staff but with full medical attention and under the supervision of the sister of an adjoining acute ward. The use of such a hostel ward means that the patients must do certain tasks themselves, but these duties are in fact part of the phase of treatment which enables the patient to leave hospital in a much fitter mental and physical state than was often the case in the past.

Apart from these matters, further research into the morbidity rather than the mortality from tuberculosis is essential. In a disease like tuberculosis, which kills at long intervals after its inception, the whole social circumstances at the time of death may be very different from those in which the disease began. A study of morbidity requires well organised team-work in which the Medical Officer of Health, Statistician, Tuberculosis Officer and the Health Visitor must all play their parts, a further pointer, if any be needed, to the necessity for a unified service to combat Scotland's most dangerous social disease.

VENEREAL DISEASES.

Under the National Health Service (Scotland) Act, 1947, the diagnosis and treatment of venereal disease became the responsibility of the Regional Hospital Board. The appointment, however, of the Medical Officer of Health as Administrative Co-ordinating Officer for Infectious Disease has made possible the retention of the scheme of administration of the venereal diseases services as a single unit for the city. The appointment of the specialists and lay staff, however, and the upkeep of the centres remain the responsibility of the Regional Hospital Board and of the respective Boards of Management. The primary objects of the scheme remain as in previous years—the early treatment of venereal disease, the follow-up of defaulters, and the tracing of contacts.

The following statistics have been prepared jointly by the Public Health Department and the Venereal Diseases Section of the Regional Hospital Board, and follow the lines laid down in previous reports.

The incidence of venereal disease for the year 1948 showed an appreciable decrease in acute syphilis and acute gonorrhoea in males and females as compared with the 1947 figures. The fall which had occurred during 1947 was maintained in 1948 and during the early months of 1949. Acute syphilis in males is still 65 per cent. above the 1938 figure which compares with 139 per cent. in 1947. Acute syphilis in females is 46 per cent. above the 1938 figure as compared with 99 per cent. in 1947.

The figures for the years 1938 to 1948 are shown in the following table :—

NEW CASES OF VENEREAL DISEASE FOR THE YEARS 1938-1948.

	Acute Syphilis.		Acute Gonorrhoea.	
Year.	Males.	Females.	Males.	Females.
1938	250	124	1,426	157
1939	293	118	1,358	143
1940	465	144	1,476	165
1941	671	279	1,720	246
1942	778	395	1,536	308
1943	671	368	1,323	407
1944	454	262	1,231	406
1945	365	252	1,301	398
1946	687	356	2,463	449
1947	597	247	2,164	305
1948	412	181	2,041	238

In the case of congenital syphilis there has been a decrease in the group " All Ages " although the rate in children under one year has increased to 1·3 per 1,000 live births as compared with 0·97 in 1947.

The total number of new and transferred cases attending the centres has decreased since the peak year of 1946 as can be seen from the following table :—

NEW AND "TRANSFERRED IN" CASES OF VENEREAL DISEASE ATTENDING THE CENTRES FOR THE FIRST TIME.

	Total New Cases.	Transferred In.
1938	5,189	245
1939	4,724	189
1940	5,021	219
1941	5,891	441
1942	6,344	642
1943	7,740	853
1944	6,544	735
1945	6,582	619
1946	9,937	1,495
1947	8,181	570
1948	7,554	818

The attendance at the centres of patients suffering from non-venereal conditions is still considerable, there being 2,949 patients in 1948 compared with 3,000 in 1947.

ATTENDANCE OF PATIENTS SUFFERING FROM NON-VENEREAL CONDITIONS DURING YEARS 1941 to 1948.

Year.	Males.	Females.	Total.
1941	880	246	1,126
1942	1,058	398	1,456
1943	2,002	708	2,710
1944	1,656	721	2,377
1945	1,674	799	2,473
1946	3,027	650	3,677
1947	2,458	547	3,005
1948	2,472	477	2,949

Contact tracing work is carried out by the staff at the male and female *ad hoc* centres and has resulted in the attendance of a number of new patients.

VENEREAL DISEASES, 1948—*Ad hoc* CLINICS.

Contact Tracing, and Follow-up of Sources of Infection.

Referred by Male Clinics.

	Wives.		Consorts.	
	Number.	Percentage.	Number.	Percentage.
Attended	126	86·9	42	58·3
Did not attend ...	19	13·1	30	41·7
	145		72	

Total Referred, 217; Total attended, 168—77·4 per cent.

Referred by Female Clinics.

	Husbands and Consorts.	
	Number.	Percentage.
Attended	33	52·4
Did not attend	30	47·6
Total Referred ...	63	

Syphilis.—The number of male patients suffering from acute syphilis coming to the clinics for the first time in 1948 was 412 which compares with 597 in 1947 and 687 in 1946. The incidence of acute syphilis in females decreased from 247 in 1947 to 181 in 1948, which compares with 356 in 1946.

The number of patients suffering from late syphilis decreased to 315 in 1948 compared with 322 in 1947.

As already mentioned, the incidence of congenital syphilis has decreased except in the group under one year.

CONGENITAL SYPHILIS.

Year.	All Cases.	Cases—1 Year.	Rate per 1,000 Live Births.
1922 ...	1,023	335	12·8
1927 ...	551	119	5·0
1932 ...	240	72	3·2
1937 ...	177	36	1·6
1941 ...	67	15	0·75
1942 ...	71	27	1·3
1943 ...	97	32	1·4
1944 ...	83	29	1·3
1945 ...	72	32	1·6
1946 ...	72	27	1·1
1947 ...	80	25	0·97
1948 ...	60	28	1·3

During the year 1948 12,692 pre-natal blood tests were carried out and 0·96 per cent. were positive. This is the lowest percentage so far obtained.

PRE-NATAL BLOOD TESTS.

Year.	Number.	Percentage Positive.
1925	—	4·9
1930	1,749	2·8
1935	3,334	1·8
1940	8,714	1·3
1942	10,265	1·18
1943	11,067	1·7
1944	10,260	1·3
1945	10,853	1·18
1946	13,946	1·23
1947	13,250	1·46
1948	12,692	0·96

All specimens are submitted to the Kahn Test and, if positive, to the Wassermann Test which is applied to the same specimen and a repeat specimen requested. A modified high sensitivity Laughlan Test is used as a screening test for the pre-natal specimens.

Gonorrhoea.—The incidence of acute gonorrhoea has fallen during the year, there being 2,279 cases in 1948 compared with 2,469 in 1947. The decrease has been maintained during the early part of 1949. Chronic gonorrhoea in both males and females has continued at a low level, the number of cases in females being 22.

CHRONIC GONORRHOEA IN FEMALES.

Year.	Number.
1938	312
1939	266
1940	229
1941	119
1942	88
1943	93
1944	54
1945	42
1946	48
1947	38
1948	22

Venereal Diseases in Seamen.—Seamen continue to form a proportion of the patients attending the male centres but the proportion of seamen to total cases suffering from early syphilis and acute gonorrhoea has fallen.

BLACK STREET, BROOMIELAW, BELLAHOUSTON CLINICS.

NEW AND TRANSFERRED-IN PATIENTS.

PROPORTION OF SEAMEN TO TOTAL CASES.

		Early Syphilis.			Acute Gonorrhoea.		
		All.	Seamen.		All.	Seamen.	
1939	...	265	54	20·4%	1,133	75	6·6%
1940	...	403	133	33·0%	1,210	224	18·5%
1941	...	793	434	54·7%	1,671	539	32·3%
1942	...	1,082	589	54·4%	1,543	532	34·5%
1943	...	1,149	577	50·2%	1.393	436	31·3%
1944	...	831	452	54·3%	1,356	428	31·6%
1945	...	679	228	33·6%	1,478	370	25·0%
1946	...	1,264	164	13·0%	3,070	435	14·2%
1947	...	872	166	19·0%	2,340	330	14·1%
1948	...	614	106	17·2%	2,152	294	13·7%

In-Patients.—During the year 1948 437 patients were treated in hospital compared with 447 in 1947. The number of male patients admitted to Belvidere Hospital was 144, a decrease of 9 as compared with the year 1947. Patients admitted to Baird Street Auxiliary Hospital and Ruchill Hospital decreased from 275 in 1947 to 266. The following table shows the admission of patients to institutions for the treatment of venereal disease.

TOTAL NUMBER OF PATIENTS ADMITTED FOR IN-PATIENT TREATMENT.

	Sex.	Primary Syphilis D.G.+W.R.—	Primary Syphilis W.R.+	Secondary Syphilis.	Latent Syphilis. (1st year).	All Later Stages.	Congenital Syphilis.	Extra-genital Infection.	Acute Gonorrhoea.	Chronic Gonorrhoea.	Soft Chancre.	Non-Specific Venereal Disease.	Non-Venereal.	Total Admissions.	Aggregate Days' Residence.	Average Days' Residence.
Belvidere Hospital	M.	12	21	17	1	42	1	1	22	5	8	10	4	144	3,781	26·3
Baird Street	M.	—	—	—	—	—	2	—	—	—	—	—	2	4	1,082	270·5
	F.	3	7	36	1	12	7	—	19	4	—	1	6	96	3,073	32·0
Ruchill Hospital	M.	—	—	—	—	—	6	—	—	—	—	—	3	9	695	77·2
	F.	1	13	40	6	47	8	—	15	3	3	6	15	157	4,985	31·8
Other Hospitals	M.	—	—	—	—	3	11	—	—	—	—	—	—	14	412	29·4
	F.	—	—	—	—	—	13	—	—	—	—	—	—	13	273	21·0
Totals		16	41	93	8	104	48	1	56	12	11	17	30	437	14,301	32·7

Attendance of Patients.—Patients attending for the first time at the various treatment centres numbered 7,554 which compares with 8,181 in 1947. There were 105,718 attendances of new and old cases and 437 patients were admitted for in-patient treatment, 64 being admitted directly without previous attendance at the centre. The *ad hoc* centres dealt with 96·7 per cent. of all acute venereal disease.

The following table summarises the attendances of new patients at the various centres :—

	Ad Hoc Treatment Centres		Glasgow
	Males.	Females.	All Centres
Acute Syphilis (includes Primary, Secondary and Latent in the First Year of Infection)	382	142	593
Acute Gonorrhoea	2,032	222	2,279
Total Acute Venereal Disease ...	2,414	364	2,872
Late and Congenital Syphilis	107	74	375
Chronic Gonorrhoea	17	22	41
Total Chronic Venereal Disease ...	124	96	416
Other Diseases, including Soft Sore, Septic Balanitis, etc.	1,198	22	1,317
Non-Venereal	2,360	384	2,949

Incidence of Jaundice.—Jaundice still occurs among patients being treated for early and late syphilis although the complication is seldom of a severe nature. During the year, out of 382 cases of early syphilis attending the *ad hoc* centres, 10·5 per cent. developed jaundice compared with 9 per cent. in 1947, while 3·7 per cent. out of 107 cases of late syphilis developed this complication. Only 2 of the early syphilitic jaundice patients required treatment in hospital and none of the cases of jaundice in late syphilis.

Issue of Salvarsan Substitutes to Medical Practitioners.—This service was discontinued on 5th July, 1948, but during the first six months of the year 9 practitioners received free supplies of salvarsan substitutes for the treatment of private patients. The total number of doses issued was 396 which compares with 457 during the year 1947.

Follow-up of Defaulters.—The follow-up of defaulters by personal visits of the Nurse Almoners and in the case of the males by follow-up letters and visits by the senior attendants at the male centres resulted in a high proportion of the patients resuming treatment. During the year the Nurse Almoners visited 1,461 female patients on 2,274 occasions and persuaded 83·5 per cent. of the patients to resume treatment. On 180 occasions wrong names and addresses had been given. With regard to the males, 3,749 follow-up letters were sent to 2,506 patients who defaulted during treatment and 76·5 per cent. of the patients resumed treatment. This compares with 3,466 letters sent to 2,237 patients during 1947, when 72 per cent. of the patients resumed treatment during the year. Wrong names and/or addresses were given by 18 per cent. of the defaulting patients.

DIABETES—SUPPLY OF INSULIN.

The supply of Insulin to diabetic persons unable to purchase it themselves and not eligible for such assistance under the National Health Insurance Scheme or Public Assistance, was initiated by this Department as early as March, 1924, prior to the passing of the Public Health (Scotland) Amendment Act, 1925. This Act extended the existing power of Local Authorities under the 1897 Act " to make such arrangements as they may think fit and as may be sanctioned by the Scottish Board of Health for providing medicines and treatment to persons who are suffering from diabetes and who in the opinion of the Local Authority require assistance in obtaining such medicines and treatment."

The largest class of population not covered by any social insurance were married women and they have formed the largest proportion of applicants (from 70 to 80 per cent.), with a small number of males who for some reason were not covered by existing insurance schemes. Many patients were in regular receipt of insulin over a period of years as were also children, who eventually reached maturity and a useful working life. Patients were encouraged to see their own doctor at regular intervals to ensure their maintaining the correct dosage. Each year a follow-up of cases who had ceased to call or send for their supplies was carried out by the Health Visitors.

The growth of this service in the 25 years of its existence will be seen from the figures that follow. Beginning with 27 patients in the first full year of the scheme (1925) the numbers gradually increased until at date of the transfer in 1948 there were 427 persons on the roll.

With the introduction of the National Health Service Act on 5th July, 1948, this service became part of the General Medical Service—patients obtaining their supplies of Insulin in the same way as any other medicine—by arrangement with their own doctor. It was found necessary to continue to issue Insulin up till October, 1948, until all the patients on the roll had made the essential arrangements for transfer.

The following figures compare the records of 1928, 1938 and 1947 with those of 1948 (January to October) and show how this service expanded in the course of its 25 years existence.

	1928.		1938.		1947.		1948.	
Cases on the roll at the end of the previous year		46		224		341		383
Cases applying for first time during current year	36		74		96		45	
Cases who had discontinued in previous years and re-applied during the current year	3	39	16	90	20	116	12	57
Cases dying in current year	3		27		34		13	
Cases who discontinued treatment during the current year	18	21	39	66	40	74	*	*
On roll at end of current year ...		64		248		383		427

* No survey made.

New Cases—	1928.	1938.	1947.	1948
Married women	27	54	60	30
Widows		9	26	9
Outwith National Insurance Scheme	5	8	5	3
Children under 16 years	4	3	5	3
Total	36	74	96	45

Age distribution of patients on the roll—	1928.	1938.	1947.	1948.
Under 10 years		1	3	3
,, 20 ,, ...		24	17	19
,, 30 ,, ...	Information not available.	4	11	10
,, 40 ,, ...		13	26	26
,, 50 ,, ...		29	38	42
,, 60 ,, ...		81	84	90
,, 70 ,, ...		71	151	165
,, 80 ,, ...		18	44	62
80 and over		1	5	6
Not stated		6	4	4
Total		248	383	427

A noticeable feature in the past ten years or so has been the growing use of Insulin of greater strength and more recently of the use of one or more types of Insulin in combination. These Insulins are more expensive and with the rapidly increasing prices that have been operative in these years has resulted in a considerable rise in the cost of this service.

		1928.	1938.	1947.	1948.
Amount (and cost) of Insulin supplied by Central Drug Store—					
Ordinary Strength	(20)	5,039	13,640	3,426	1,668
Double	(40)	216	4,140	4,170	2,136
Extra Double	(80)	—	57	2,162	1,239
Protamine Zinc	(40)	—	3,216	11,553	6,195
Protamine Zinc	(80)	—	—	2,190	1,140
Globin	(40)	—	—	366	872
Globin	(80)	—	—	1,232	276
Total		5,255	21,053	25,099	13,526

	1928.	1938.	1947.	1948.
Cost (including syringes, repairs to syringes and needles)	£547	£781	£2,439	£1,391

SECTION V.

PORT HEALTH AUTHORITY.

The jurisdiction of the Authority remained unaltered during the year and the boarding arrangements were carried out as in former years. Medical staffing arrangements were as before, also the lay staff which consists of one chief inspector, nine assistant inspectors and six rat searchers.

A satisfactory feature of the trade of the port was an increase during the year in the number of incoming foreign going vessels and vessels from the Irish Free State. During 1947 the figures were 878 and 285 and during 1948 they were 1,122 and 401 respectively.

There are no figures available for one complete year of the total amount of foreign and coastwise shipping arriving in the port as the Clyde Navigation Trustees' report commences on 1st July one year and ends on 30th June the following year. The most recent report issued, *i.e.*, 1st July, 1947, to 30th June, 1948, shows that some 16,051 vessels with a total tonnage of 11,851,832 called and sailed from the port in that period. Five million, five hundred and ninety-five thousand, nine hundred and fifty-six (5,595,956) tons of cargo was handled in the various docks, 3,697,122 tons inwards from foreign and coastwise and 1,898,834 outwards.

Normal passenger traffic showed an improvement this year and with the introduction of more passenger carrying vessels it is expected that the traffic to and from the port will be further improved next year. At present the smaller passenger carrying vessels, carrying from 6 to 100 persons, compared with the large passenger liner of the pre-war period is the type most common among the arrivals. The number of visits requiring to be made for the purpose of inspection is probably greater than in the pre-war period on account of the smaller number of passengers carried.

During the year 1,122 vessels from foreign ports, either direct or coastwise, and 401 from the Irish Free State were boarded. Of the 1,122 vessels from foreign ports, 607 were from infected ports and 515 from non-infected ports.

Particulars of the arrivals are given in the following tables :—

NATIONALITY OF VESSELS ARRIVING DURING 1948.

Nationality.	Ships.	Crews.	Passengers.
British	850	45,209	4,063
Danish	21	611	55
Dutch	20	260	5
Egyptian	1	34	—
Finnish	1	36	—
French	4	98	—
Greek	15	668	—
Honduras	1	33	—
Icelandic	7	298	470
Italian	3	126	—
Indian	1	74	—
Norwegian	45	1,393	37
Panamanian	25	751	10
Polish	3	125	3
Russian	1	52	—
Swedish	63	1,770	12
U.S.A.	59	2,668	19
Yugo Slav...	2	107	—
Total	1,122	54,313	4,674

TONNAGE OF VESSELS ARRIVING DURING 1948.

Month.	No. of Ships.	Crews.	Net. Reg. Tonnage.
January	79	4,210	287,161
February	73	3,499	235,765
March	85	4,523	290,408
April	89	4,024	285,632
May	107	5,010	366,654
June	104	5,062	351,681
July	99	5,084	347,914
August	99	4,419	332,179
September	97	4,858	354,486
October	89	4,474	307,560
November	95	4,267	296,558
December	106	4,883	338,871
Total	1,122	54,313	379,4869

NATIONALITY OF SHIPS' CREWS ARRIVING DURING 1948.

Month.	British.	Natives of India.	Chinese	Other Nationalities.	Total.	Passengers.
January	2,314	965	260	671	4,210	1,620
February	1,748	851	162	738	3,499	45
March	2,770	1,037	56	660	4,523	1,888
April	2,439	766	44	775	4,024	110
May	2,552	1,235	98	1,125	5,010	78
June	3,097	646	239	1,080	5,062	128
July	2,750	1,144	38	1,152	5,084	246
August	2,381	866	45	1,127	4,419	315
September	2,685	919	233	1,021	4,858	59
October	2,470	1,103	81	820	4,474	95
November	2,176	962	58	1,071	4,267	20
December	2,884	942	143	914	4,883	70
Total	30,266	11,436	1,457	11,154	54,313	4,674

NUMBER OF SHIPS FROM FOREIGN PORTS AND IRISH FREE STATE DURING 1948.

Month.	From Infected Ports.									From Non-Infected Ports.			Total.			From Irish Free State
	Class "A"—Direct.			Class "B"—Coastwise.			Total "A" and "B."			Direct and Coastwise.			From Foreign Ports.			
	Ships	Crews	Passengers	Ships	Crews	Passengers	Ships	Crews	Passengers	Ships	Crews	Passengers	Ships	Crews	Passengers	
January	21	1,086	1,429	26	1,698	187	47	2,784	1,616	32	1,426	4	79	4,210	1,620	25
February	19	714	8	23	1,585	—	42	2,299	8	31	1,200	37	73	3,499	45	29
March ...	19	990	1,316	26	2,111	542	45	3,101	1,858	40	1,422	30	85	4,523	1,888	38
April ...	24	1,103	89	21	1,347	—	45	2,450	89	44	1,574	21	89	4,024	110	30
May ...	26	1,100	25	33	2,247	—	59	3,347	25	48	1,663	53	107	5,010	78	29
June ...	19	810	42	37	2,515	1	56	3,325	43	48	1,737	85	104	5,062	128	32
July ...	23	908	24	26	2,243	—	49	3,151	24	50	1,933	222	99	5,084	246	31
August	24	967	120	30	1,664	—	54	2,631	120	45	1,788	195	99	4,419	315	46
Septemb'r	20	851	14	33	2,279	12	53	3,130	26	44	1,728	33	97	4,858	59	37
October	17	748	26	31	2,228	1	48	2,976	27	41	1,498	68	89	4,474	95	47
November	25	987	10	28	1,872	2	53	2,859	12	42	1,408	8	95	4,267	20	31
December	18	730	10	38	2,130	5	56	2,860	15	50	2,023	55	106	4,883	70	26
TOTAL ...	255	10,994	3,113	352	23,919	750	607	34,913	3,863	515	19,400	811	1,122	54,313	4,674	401

There was a reduction in the number of cases of illness found on board ships on arrival from 157 to 130 but there was an increase in the number of cases occurring during the voyage and disposed of prior to arrival. The following tables show how they were disposed of :—

CASES FOUND ON ARRIVAL.

Disease.	Removed to Hospital.	Sent Home.	Referred to Clinic.	Left on Board.	Died.	Total.
Chickenpox	3	—	—	—	—	3
Catarrhal Jaundice ...	—	1	—	—	—	1
Continued Fever ...	1	—	—	—	—	1
Dysentery	4	—	—	—	—	4
Infective Hepatitis ...	1	1	—	—	—	2
Malaria	11	—	—	—	—	11
Measles	4	—	—	—	—	4
Mumps	—	1	—	—	—	1
Pleurisy	2	—	—	—	—	2
Pyrexia Unknown Origin	1	—	—	—	—	1
Pneumonia	17	—	—	—	1	18
Pulmonary Tuberculosis	—	1	—	—	—	1
Scarlet Fever ...	2	—	—	—	—	2
Venereal Disease ...	1	—	16	—	—	17
Whooping Cough ...	1	—	—	—	—	1
Accidents and Other Illnesses	58	1	—	—	2	61
Total	106	5	16	—	3	130

CASES OF ILLNESS OCCURING DURING THE VOYAGE.

Disease.	How Disposed of.
Inguinal Lymphogranuola ...	Treated on Board.
Do.	To R.A.F. Hospital at Aden.
Meningitis	To hospital at Beira.
Bubo	Treated on board.
Pneumonia	To hospital at Oran.
Pulmonary Tuberculosis ...	To hospital at Takoradi.
Chancre and Bubo	Treated on board.
Pyrexia Unknown Origin ...	do.
Disease of the Throat	To hospital at Narvik.
Acute Appendicitis	To hospital at Liverpool.
Heart Failure	Buried at sea.
Poliomyelitis	To hospital at Aden.
Skin Disease	To hospital at Alexandria.
Bronchitis	To hospital at London
Stomach Trouble	do.
Tuberculosis	To hospital at Cardiff.
Stomach Ulcer	do.
Mumps	Landed at Liverpool.
Pulmonary Tuberculosis (?) ...	To hospital at Aden.
Carcinoma (?)	To hospital at Liverpool.
Impetigo	Treated on board.
Chickenpox	To hospital at Cape Town.

CASES OF ILLNESS DURING THE VOYAGE—continued.

Disease.	How Disposed of.
Tuberculosis	Landed at Liverpool. (Military passenger).
Chickenpox	To hospital at New York.
Do. (?)	To hospital at Avonmouth.
Disease of the Kidneys ...	Treated on board.
Erysipelas	To hospital at Liverpool.
Pneumonia	Died and buried at sea.
Arthritis	To hospital at Miami.
Cyst on Back	Treated on board.
Kidney (Stone)	do.
Catarrh	Landed at Teneriffe.
Inflammation of Caecum ...	Landed at Leixois.
Appendicitis	Landed at Manchester.

There were no cases of plague, cholera, yellow fever, smallpox or typhus fever during the year, but 149 contacts (59 Goanese and 90 Lascars) with a case of smallpox which occurred on board the s.s. " Strathnaver " during a voyage from India to Southampton arrived at the port to take over crew duties on board two vessels. They had been vaccinated at Bombay before embarking on the " Strathnaver " and again at sea. Medical inspection was carried out on arrival and at intervals during the period of surveillance which lasted fourteen days. No case of smallpox was found among them.

ALIENS ACT, 1920.

There was an increase in the number of vessels carrying alien passengers to the port but a reduction in the total number of aliens : 75 vessels against 56 and 717 aliens against 1,194 last year. Close co-operation was maintained with H.M. Immigration Officers in the examination of these persons. There were no rejections on medical grounds. The following table shows the nationality of the aliens, together with the numbers :—

Austrian	5	Iranian	1
Burmese	1	Iraqui	4
Belgian	1	Italian	2
Central and South American	1	Latvian	2
Cuban	1	Norwegian	26
Czech	2	Other Non-European ...	7
Danish	34	Palestinian	1
Dutch	9	Polish	7
Egyptian	1	Portuguese	397
Esthonian	1	Spanish	4
Finnish	1	Swedish	12
French	9	Swiss	18
Greek	3	U.S.A. Citizens	28
Icelandic	139		

PARROTS (PROHIBITION OF IMPORT) REGULATIONS (SCOTLAND), 1930.

Six parrots and eleven budgerigars were found on board ten vessels on arrival. In every case the birds belonged to members of the crew who gave a written undertaking that they would not be landed in this country.

Destruction of Rats.—A total number of 4,619 rats were destroyed during the year, 3,986 on board ships and 633 in sheds and other premises adjoining the harbour. Of the total number of rats, 3,490 were found dead after fumigation and 1,129 were trapped. Five hundred and thirty-eight were submitted to the City Bacteriologist for examination for bacillus pestis with negative result.

In the following tables, details are shown of the rats destroyed on board ship, in sheds and other premises adjacent to the harbour.

ON BOARD SHIP.

Method of Destruction	Infected Ports.				Non-Infected Ports.				Total
	R. Rattus		R. Norvegicus		R. Rattus		R. Norvegicus		
	M.	F.	M.	F.	M.	F.	M.	F.	
HCN	1,746	1,068	0	0	423	253	0	0	3.490
SO_2	0	0	0	0	0	0	0	0	0
Trapping	218	137	0	0	92	49	0	0	496
	1,964	1,205	0	0	515	302	0	0	3.986

SHEDS AND OTHER PREMISES.

R. Norvegicus		R. Rattus		
Male.	Female.	Male.	Female.	Total.
69	29	306	229	633

Deratization and Deratization Exemption Certificates.—Three hundred and forty-three certificates were issued during the year—143 Deratization Certificates and 200 Deratization Exemption Certificates. One hundred and thirty-five of the Deratization Certificates were granted after satisfactory fumigation and eight after trapping operations had been carried out. Thirty-eight of the total number of certificates were issued to new vessels before sailing on their maiden voyage. Four of the 38 required to be fumigated. The number of dead rats recovered after fumigation on each of these vessels was 12, 18, 45 and 54 respectively.

Normally, new vessels, unless arriving from a foreign port, are not required to be in possession of a certificate and it is only at the request of the owners or their agents that a certificate is granted.

The advantages to owners and masters of new vessels trading foreign of obtaining a certificate before sailing outwards are many among which the most important is perhaps the prevention of delay to the vessel in ports abroad for the purpose of obtaining an appropriate certificate which in the case of those showing evidence of rat infestation would mean deratization.

HYGIENE IN CREW SPACES, ETC.

Inspection and re-inspection of new arrivals and vessels already in port were carried on diligently throughout the year, resulting in the discovery of 1,220 defects, the majority of which were remedied before the vessel sailed. As in former years verminous conditions accounted for the largest number of unsatisfactory conditions discovered. D.D.T. and Gammexane continue to play a major part in the continuous war against insects responsible for the verminous conditions found in the various compartments on board ship. At the time of the introduction of these insecticides it was the practice to use them alone, either in the form of a spray or dispersible powder. Recently, however, additional insecticides have been added, chiefly pyrethrum which gives a rapid " knock down " property to the insecticide, leaving the D.D.T. or Gammexane with their residual effect to complete the job. This residual effect is very often destroyed on board ship on account of bulkheads and partitions, etc., being coated with enamel paint too soon after the application of the insecticide but this difficulty may be overcome when it can be proved that D.D.T. or Gammexane mixed in paint does not lose its insecticidal properties. While there is no general agreement on this point claims have been made that paint containing D.D.T. has been used and found to be effective against many insects.

The type of defect discovered is shown in the following tables :—

General Neglect—	Coasters.	Foreign Arrivals.	Totals.
Drinking Water Tanks	—	12	12
Accumulations of Garbage	1	54	55
Gear in Sleeping Compartments	—	9	9
	1	75	76

Structural Defects—	Coasters.	Foreign Arrivals.	Totals.
Ports or Deadlights leaking	4	31	35
Deckheads leaking	—	49	49
Heating Apparatus defective	2	36	38
Floors broken	—	19	19
Lighting defective	—	—	—
Ventilation defective	1	2	3
Food Locker Doors broken	—	25	25
Steampipes leaking	—	53	53
	7	215	222
Wash Places and Water-Closet Compartments—			
Seats broken or missing	4	38	42
Doors broken or defective	—	19	19
W.C. Basins broken	—	—	—
Lighting defective	—	—	—
Ventilation defective	—	—	—
Wash Basins broken	—	2	2
Soilpipe or Storm Valve defective	—	34	34
Floors broken	2	16	18
	6	109	115
Functional Neglect—			
Paintwork dirty	—	63	63
Floors and Woodwork dirty	6	59	65
Tables and Benches dirty	—	61	61
Alleyways dirty	—	50	50
Food Lockers dirty	1	57	58
Verminous condition	—	224	224
Galleys dirty	—	11	11
Scuppers choked	—	36	36
Accumulation of Rubbish	—	31	31
Beds and Bedding dirty	—	8	8
	7	600	607
Wash Places and Water-Closet Compartments—			
Troughs of W.C. Basins foul or choked ...	3	26	29
Floors or Woodwork dirty	—	25	25
Paintwork dirty	—	41	41
Scuppers choked	—	27	27
Flushing Apparatus defective	—	45	45
Wash Basins dirty or choked	—	33	33
	3	197	200
	24	1,196	1,220

NUMBER AND NATIONALITY OF VESSELS ON WHICH DEFECTS WERE DISCOVERED.

Nationality.	No. of Arrivals.	No. Showing Defects.
Argentinian	—	—
British	850	264
Chinese	—	—
Danish	21	2
Dutch	20	—
Egyptian	1	—
Finnish	1	—
French	4	2
Greek	15	6
Honduras	1	—
Icelandic	7	—
Indian	3	2
Italian	1	—
Norwegian	45	1
Panamanian	25	2
Polish	3	—
Portuguese	—	—
Russian	1	—
Spanish	—	—
Swedish	63	2
U.S.A.	59	1
Yugo Slav	2	1
	1,122	283

One hundred and forty-one "Intimations" in terms of the Public Health (Scotland) Act, 1897, were served and 153 verbal intimations were given in respect of nuisances discovered on board 294 vessels.

Rags, Hair, Hides and Bones.—The following table shows the amount of imported rags, hair, hides and bones, the number of shipments and the country of origin :—

Source of Origin.	No. of Ships.	Rags Bundles.	No. of Ships.	Hair Various Bundles.	No. of Ships.	Hides Various Bundles.	No. of Ships.	Bones Bags.
Africa	—	—	—	—	—	—	1	125
Belgium	10	369	—	—	—	—	—	—
Canada	—	—	1	1,144	—	—	—	—
Egypt	9	2,950	—	—	—	—	—	—
France	3	739	—	—	—	—	—	—
India	—	—	—	—	2	19	8	8,024
Italy	8	2,765	—	—	—	—	—	—
New Zealand	—	—	—	—	1	56	—	—
Persia	1	110	—	—	1	23	—	—
South America	—	—	5	420	—	—	3	35,024
United States	—	—	27	13,267	2	603	—	—

Anthrax.—Six specimens of cow hair and three of cow-tail hair, taken from three consignments, all from South America, were submitted to the City Bacteriologist who reported all specimens free from B. Anthracis.

No cases of anthrax were reported among the persons engaged in the discharge of the above articles.

IMPORTED FOOD REGULATIONS.

Although there have been a few consignments of foodstuffs imported by private concerns the importation of foodstuffs in general continues to be the concern of the Ministry of Food.

During the year approximately 655,462 tons of foodstuffs arrived at the port from overseas. This amount is greater by 44,949 tons than that imported the previous year. These figures do not include foodstuffs arriving in coasting vessels trading within the British Isles and Eire. Of the total shown above 5,302$\frac{3}{4}$ cwts. were found unsuitable for human consumption and were disposed of for either animal feeding, technical purposes or destroyed.

One hundred and ninety-eight samples of foodstuffs were submitted to the City Analyst who reported seventeen unsatisfactory and sixteen samples were submitted to bacteriological examination, fourteen of which were found to be unsatisfactory. Thirteen of the samples found to be bacteriologically unsatisfactory concerned reconstituted fat substitutes and greasing compounds which contained varying amounts of Faecal B. Coli and B. Pyocyaneus.

The following table shows the character and quantity of the foodstuffs imported direct during 1948 (but does not include coastwise or trans-shipped cargoes) :—

Article.	Weight.		Article.	Weight.	
	Tons.	Cwts.		Tons.	Cwts.
Apples	14,707	3	Flour	68,659	13
Acids	12	10	Farinaceous Foods ...	8,858	4
Almonds	133	10	Gelatine	6	10
Bacon	1,016	6	Ginger (Preserved) ...	879	17
Barley	23,584	17	Grapes	255	5
Butter	10,384	18	Grape Fruit	2,996	12
Bananas	6,081	5	Ham	128	6
Cheese	2,166	9	Honey	119	16
Coffee	1,731	14	Jams and Jellies ...	4,634	13
Cocoa	1,030	—	Lard	347	9
Condiments	133	14	Lemons	2,295	13
Confectionery	3	—	Licorice	1	19
Eggs	1,943	16	Maize	111,897	15
Eggs (Frozen)	3,128	3	Meats (Canned) ...	4,261	14
Egg Powder	345	18	Milk (Canned)	370	7
Fruits (Canned) ...	2,239	17	Melons	8	15
Fruits (Dried)	17,168	14	Nuts (Various)	22,016	3
Fruit Juices	249	7	Oils (Various)	11,252	11
Fruit Pulp	456		Oats	18,571	4
Fish (Canned)	523	10	Onions	1,767	10

	Weight			Weight	
Article.	Tons	Cwts.	Article.	Tons	Cwts.
Oranges	55,444	12	Tomatoes (Canned)	249	16
Orange and Lemon Peel	15	4	Tomato Juice	819	11
Peas	36	—	Tomato Soup	1,336	5
Pears	152	—	Tomato Paste	752	9
Potatoes	283	2	Tomato Puree	80	2
Rice	2,953	5	Tomato Sauce	152	—
Sauce	830	18	Tea	4,663	3
Syrup	12	—	Vegetables (Canned)	1,102	13
Sundries	86	1	Wheat	238,301	9
Tomatoes	1,821	1			

Total Weight—655,461 tons, 18 cwts.

The following foodstuffs were found unfit and disposed of to the satisfaction of the Port Medical Officer :—

Article.	
Aerated Waters	105 pint bottles.

	Weight.			Weight.	
Article.	Cwts.	Qrs.	Article.	Cwts.	Qrs.
Bacon	—	2	Milk (Canned)	14	2
Barley	223	3	Maize	577	3
Candied Peel	1	2	Nuts	185	—
Fruits (Dried)	325	2	Oranges	488	—
Fruits (Canned)	11	3	Onions	33	—
Fruit Pulp	5	3	Pork and Beans	—	1
Fish (Frozen)	1	—	Sago	1	3
Flour	1,103	3	Soups (Canned)	4	2
Greasing Emulsion	—	2	Tea	—	1
Grapes	—	2	Tomato Juice	7	3
Jams	7	3	Tomato Puree	2	1
Meats (Canned)	4	1	Vegetables (Canned)	6	2
Meats (Pickled)	2	—	Wheat	2,292	3

Total Weight—5,302 cwts., 3 qrs.

(*Note.*—3 cwts. were from ships' stores).

FOODSTUFFS EXAMINED BY CITY ANALYST.

Article.	Fit for Human Consumption.	Unsatisfactory or not in conformity with Regulations.	Remarks.
Apples	10	—	
Butter	7	—	
Cereals	2	—	
Candied Peel	1	—	
Citric Acid	1	—	
Egg (Frozen)	3	—	
Egg Powder	2	—	
Fats (Various)	11	1	Contained mineral oil.
Flour (Various)	5	—	
Fruits (Canned)	4	—	
Fruits (Dried)	23	2	Dried Apricots—contained larvae of Dried Fruits Beetle, " Corpophilus Hemipterus "—2¼ cwts. condemned. Currants—sea-water damage—5½ cwts. condemned.

Article.	Fit for Human Consumption.	Unsatisfactory or not in conformity with Regulations.	Remarks.
Fruit Pulp	5	—	
Gelatine	4	—	
Grape Fruit	2	—	
Grape Fruit Juice ...	—	1	Contained an excess of SO_2.
Grape Juice	1	—	
Ginger (Preserved) ...	5	—	
Ham and Bacon ...	—	2	Contaminated with washing soda and dye. Reconditioned and passed for human consumption—½ cwt. condemned.
Honey	1	—	
Jams and Jellies ...	14	—	
Lard	7	1	Contaminated with silicate and antimony. Reprocessed and passed for human consumption.
Meats (Canned, etc.)	9	—	
Milk (Canned) ...	2	—	
Milk (Dried) ...	1	—	
Oils (Various) ...	5	1	Contained mineral oil.
Onions	—	1	Contaminated with red oxide —33 cwts. condemned.
Oranges	13	—	
Orange Juice ...	—	5	Contained an excess of SO_2.
Pears	2	—	
Pork and Beans ...	2	—	
Rice	2	—	
Sauces	3	—	
Soups	1	—	
Syrup	4	—	
Tea	11	—	
Tomatoes (Canned)	13	3	Contained an excess of copper.
Vegetables (Canned)	5	—	

In the early part of the year the Minister of Food appointed a Food Standards Committee to review the composition of foods and recommended standards based on quality and nutritional value. A Sub-Committee was appointed with instructions to consider (*a*) the available evidence in regard to the effect of the ingestion of foods contaminated with metals or other injurious elements; (*b*) the possibility of prescribing limits of contamination; and (*c*) the technological problems which might arise from the prescription of such limits.

The Medical Officer of Health for the City in his capacity as Port Medical Officer was appointed a member of the Sub-Committee and much useful data from the records of the Department was supplied to the Committee from time to time during the year.

The copper content of Tomato Puree, etc., and the contamination of foodstuffs in general with arsenic are under consideration at the present moment and it is expected that consideration will be given later to contamination of foodstuffs with other metals and impurities. The object is a worthy one and has the support of all officials responsible for the inspection and examination of our food supplies.

Many samples were taken during the year of fat substitutes in the form of Greasing Compounds, Emulsions, Fat Extenders, etc., and submitted to the City Bacteriologist and City Analyst for examination. The Bacteriologist's reports indicated that several of them were unsatisfactory in that faecal B. Coli, B. Pyocyaneus and other organisms were present in varying quantities.

The analytical report showed them to consist of a small percentage of animal fat, moisture and in many instances varying percentages of mineral oil (probably vaseline).

Consignments of these substitutes arrived here from Northern Ireland and were distributed to bakers, etc., throughout the country. While some of the containers were labelled " Food—Urgent " they were described in the ship's manifest as " Inedible." Enquiry into the origin of the ingredients revealed that the fatty substance was reconstituted from fatty acids, derived from the process of " splitting " or " saponification " of animal fats. Usually the class of fat subjected to the process of splitting is unsuitable for edible purposes.

Fairly large consignments of these inedible fats are imported from abroad where they have been condemned as unfit for human consumption and may in fact have been produced from diseased animal carcases. These is no effective control of these fats once they have been distributed for technical purposes which is the condition of their entry into this country and the fact that they may lose their identity in the process of splitting and return as an article of food in the form of shortners, etc., renders the " Official Certificate " required for imported edible fats unnecessary. There have been a few instances recently of some of these substances being sold as " off the ration " fats.

Food Insect Pest Disinfestation.—Nine vessels were treated for destruction of food insect pests at the request of the Department of Agriculture, Insect Pest Infestation Section. Owners of these vessels agreed to have other compartments necessary to qualify for the issue of a Deratization Certificate treated at the same time after which Deratization Certificates were granted.

Routine fumigation of importations of dried fruits with " Etox " (Ethylene Oxide) was carried out in store, also fumigation of insect infested grain cargoes with " Cyanogas."

SANITATION AT THE DOCKS.

There was no change in the cleansing arrangements at the docks during the year nor was there any change in the sanitary arrangements.

A survey of the docks for the purpose of preparing a report on " Dock Amenities " within the Port of Glasgow was carried out by a working party drawn from members of a Committee set up at the request of the Minister of Labour. The Committee which was representative of all parties interested in the Port included the Port Medical Officer.

The survey was divided into three sections—

(I) Sanitary Arrangements.
(II) Canteens.
(III) Washing Facilities, Drinking Water Supplies and Drying of Clothes.

The report showed the following details :—

(I) *Sanitary Arrangements.*—There are 116 sanitary conveniences containing seating accommodation for 636 persons—modern pedestal type 308 persons ; trough type 292 persons ; and dry pan type 31 persons. All the accommodation is partitioned but without doors except in Govan Dry Dock which conforms to the standard laid down in Sanitary Accommodation Order, 1938.

(II) *Canteens.*—There are six canteens capable of supplying meals to 1,220 persons at one sitting. Four of the canteens are owned and staffed by the Clyde Navigation Trustees and two are owned and managed by the Glasgow Sailors' Home.

(III) *Washing Facilities.*—With the exception of a compartment within the cargo shed at Kingston Dock which is fitted with twelve clothes' lockers and two spray nozzles supplied with hot water from a geyser and the facilities for diners within the canteens there are no proper washing facilities.

Drinking Water Supplies.—A good supply of drinking water is provided at 138 points conveniently situated throughout the docks.

Drying and Storage of Clothes.—There is no provision made for the drying and storage of clothes.

The following is a summary of the report submitted by the Committee to the Ministry of Labour :—

1. *Sanitary Accommodation.*—(*a*) It was unanimously agreed that the dry closet conveniences in Glasgow Harbour should be removed as soon as possible, and re-sited so as to allow of a water carriage system.

(*b*) That all sanitary conveniences should be modernised to conform with the present day requirements that they should be individual water closets of the pedestal type with adequate screening and doors, and should in general conform to the provisions of the Sanitary Accommodation Order, 1938. To this effect it would require that the Factories Act, 1937, Section 105, should be so amended to include the provision of Part I in relation to Sanitary Conveniences at Docks.

(*c*) That more effective supervision of the cleansing of sanitary conveniences should be provided to ensure that they are thoroughly cleansed at least once a day.

2 *Canteens.*—Recommendations are made in respect of improvements, such as :—

- (*a*) More adequate accommodation for staff.
- (*b*) Improved lighting and ventilation.
- (*c*) Smaller tables and, in some instances, hand chairs to replace the present forms.
- (*d*) More adequate floor covering to ensure cleanliness and allay dust.
- (*e*) Improved washing facilities and cloakroom facilities for staff.
- (*f*) It is recommended that the hours of opening of all canteens in the harbour be the same.

3. *Washing Facilities.*—(*a*) The present washing facilities in the canteens are thought to be sufficient for the needs of the diners. It was felt, however, that an adequate supply of soap should be supplied to canteens to ensure that soap is available for those using the wash room.

(*b*) *Kingston Dock.*—That the spray baths be enlarged and the lockers increased in number.

(*c*) That the gas-cleansing stations in Queen's, Rothesay and King George V Dock be adapted and modified for use as spray baths with facilities for the storage of clothes.

4. *Drinking Water Supplies.*—The drinking water supplies in Glasgow Harbour are considered adequate, but the method of supply by tap and Kennedy Well is not considered hygienic. It is recommended, therefore, that these be replaced by upward jet fountains with probably a tap with a press button underneath.

5. *Drying of Clothes.*—(*a*) At open berths such as at Rothesay Dock, South Wall, Princes Dock, North Wall, Queen's Dock, where there is no shelter, that accommodation be provided where the men could dry their clothes at some convenient part in these areas.

(*b*) " Hanging Horses " to be provided in the sheds so that the men can hang their clothes up so that the clothes may be adequately ventilated and dried.

6. *Amenities Block.*—The Committee were of the opinion that a large " amenities block " which would incorporate many, if not all, of the features and recommendations made in this report would be more economical than small units scattered over the docks. Furthermore, at a large block it would be possible to employ one or more attendants to supervise cleaning and the storage and drying of clothing.

The block may consist of the " call on " stance, rest room, medical centre, sanitary and washing accommodation and accommodation for the storage and drying of clothes.

7. *Legislation.*—Consideration would require to be given to the making of further regulations under the powers conferred in Section 46 of the Factories Act, 1937, embracing Sections 41, 42 and 43 and to apply the provisions of these Sections, in so far as they are practicable to docks, quays and wharves.

The following statement submitted by the Corporation Veterinary Surgeon indicates the work done under the Imported Food Regulations, during 1948 :—

EXAMINED.

Beef—	
Quarters	122,73
Cuts	2,938
Bags	130,119
Veal—	
Sides	2,188
Quarters	1,239
Bags	2,450
Mutton—	
Carcases	231,288
Bags	10,388
Lamb—	
Carcases	1,069,461
Cuts	3,576
Bags	277
Pork—	
Sides	32,302
Quarters	973
Bacon—	
Bales	10,839
Goats—	
Carcases	3,521
Poultry—	
Fowls, Boxes	5,508
Ducks, Boxes	535
Turkeys, Boxes	73
Chickens, Cases	605
Mixed Poultry, Cases	2,243
Rabbits and Hares—	
Rabbits, Cases	22,578
Rabbits, Crates	15,215
Hares, Boxes	119
Sundries—	
Sausages, Boxes	45
Offal—	
Ox Tongue, Bags	3,887
Ox Tongue, Roots, Bags	873
Ox Cheeks, Bags	687
Ox Hearts, Bags	2,770
Ox Livers, Bags	19,571
Ox Stomachs, Bags	4,312
Ox Kidneys, Bags	4,230

Offal—	
Ox Tails, Bags	1,291
Ox Skirts, Bags	328
Ox Sweetbreads, Bags	370
Ox Shins, Bags	237
Ox Head Meat, Bags	22
Calf Tongues, Bags	162
Calf Hearts, Bags	78
Calf Hearts, Boxes	2
Calf Livers, Boxes	1,680
Calf Kidneys, Bags	233
Calf Feet, Bags	210
Sheep Tongues, Bags	6
Sheep Hearts, Bags	807
Sheep Hearts, Boxes	9
Sheep Livers, Boxes	2,570
Sheep Kidneys, Boxes	70
Sheep Kidneys, Bags	464
Sheep Casings, Tierces	6
Sheep, Pancreas Glands, Boxes	97
Lamb Tongues, Bags	946
Lanb Hearts, Bags	2,774
Lamb Hearts, Boxes	1,275
Lamb Livers, Boxes	21,520
Lamb Sweetbreads, Bags	155
Lamb Casings, Tierces	92
Pig Tongues, Bags	119
Pig Hearts, Bags	94
Pig Hearts, Boxes	12
Pig Livers, Boxes	1,242
Pig Stomachs, Bags	216
Pig Kidneys, Bags	104
Pig Casings, Tierces	10
Pig Mixed Offal, Bags	98
Pig Sundries, Bags	57
Goat Tongues, Bags	17
Goat Hearts, Bags	13
Goat Hearts, Boxes	2
Goat Livers, Pgks.	55
Goat, Kidneys, Boxes	15

CONDEMNED.

Beef—	
Quarters	10
Bags	7
Lbs.	1,257
Veal—	
Lbs.	18
Mutton—	
Carcases	31
Quarters	4
Bags	74½
Lbs.	1,282
Lamb—	
Carcases	53½
Sides	4
Cuts	11
Bags	28
Trunks	52½
Lbs.	90
Rabbits—	
Lbs.	6
Offal—	
Ox Tongue Roots, Bags	3
Ox Tongue Roots, Lbs.	2
Ox Cheeks, Bags	1
Ox Livers, Bags	6
Ox Livers, Lbs.	11
Ox Tails, Lbs.	33
Lamb Tongues, Bags	9
Lamb Livers, Boxes	11
Lamb Livers, Lbs.	6

SECTION VI.

HOUSING.

During 1948 the Corporation completed 2,400 permanent houses, to which there has to be added the erection of 376 temporary houses and the conversion of 329 requisitioned dwellings, making a total increase in dwelling accommodation of 3,105 houses. The following table shows the number of houses completed during the last eleven years :—

1938	2,936	1944	484
1939	2,227	1945	572
1940	980	1946	1,891
1941	791	1947	3,052
1942	1,124	1948	3,105
1943	931		

At 31st December, 1948, the total number of houses provided by the Corporation since the commencement of Local Government operations was 65,960. The types of houses are shown in the following table :—

Ordinary Schemes	29,218
Temporary Houses	2,550
House Purchase	103
Intermediate Schemes	14,650
Rehousing Schemes	14,781
City Improvements and Other Departments	3,169
Scottish Special Housing Association	204
Requisitioned Properties	1,285

The powers of the Secretary of State under Defence Regulation 51 permitted the requisitioning of vacant dwelling and other accommodation for families who were inadequately housed and during the operations of this regulation some 1,285 dwellings have been provided in Glasgow. The powers conferred by this Defence Regulation are due to cease in 1952 and the Secretary of State now intimates to Local Authorities that unless in exceptional circumstances he does not propose to proceed with any further requisitioning. During the period in which this regulation was in force empty shops, large houses and other buildings have been taken over and converted into dwelling-houses, sometimes successfully but in many instances—particularly in the case of shops—only sub-standard accommodation has been provided.

By Circular D.H.S. 141/1948 the Secretary of State requested that the Local Authority should review the waiting lists in order to provide a firm basis for the estimation of the housing needs of the country and if necessary the re-adjustment of the housing programme. This review was undertaken by the City Improvements Department during the early part of 1949 and the total number of forms issued to applicants on the waiting list was 121,195. Of this number over 19,000 were not returned, 10,000 were returned by the Post Office (" Gone Away ") and 1,328 replied that they did not wish to be considered for rehousing. The total number of live applications therefore was just over 89,000. This number does not, of course, represent the total number of families in need of rehousing as there must have been many applicants sorely in need of new accommodation who did not receive the questionnaire. Of the numbers returned, 33,260 were homeless families, 30,017 were overcrowded and 25,823 were in neither of the above categories. On the standard of occupancy recommended by the Scottish Housing Advisory Committee three-quarters of the 89,000 live applications required three-apartment houses and the remainder mainly four or five apartments. In this estimate of the accommodation required no allowance was made for family growth or the need for ensuring sex separation at the age of ten.

In spite of their need of improved accommodation there are many families in the city who have not yet made application to the City Improvements Department. A considerable proportion of the tenants in unfit properties did not make an application, it having been their custom to depend on being rehoused when the property is demolished. The cessation of the demolition of unfit properties has considerably upset their expectation of being accommodated in rehousing schemes. With regard to the tuberculous families, it is often the case that it is only when a member falls ill with tuberculosis that the family qualify for consideration. Many are or were satisfied with their existing housing accommodation until the need for isolation of the infectious case became pressing.

During the year it was possible to represent as unfit only 45 houses. The actual rehousing of the tenants of properties condemned as unfit during the year 1947 was delayed into 1948 owing to the lack of suitable alternative accommodation. It is hoped, however, to operate a modified scheme of slum clearance during the coming year and to clear the Orkney Street and Neptune Street area for rebuilding. This area, which was the subject of a Clearance Order in 1937, consisted originally of 720 houses, of which 381 had been demolished up to the end of 1948 and a further 104 are in the course of demolition. The remaining number, amounting to 235, will be cleared as and when their site is required for rebuilding.

Housing property, especially of the poorer type, continues to deteriorate and more and more of this class of property is being abandoned or being offered free of charge to the Corporation as the cost of upkeep has exceeded the income from the property. The Housing Committee has viewed the problem from the aspect of keeping in use accommodation which houses families who might otherwise have to be provided with homes by the Local Authority. Where the property is one which can be put into a reasonable state of repair at a moderate cost and the feu duty or ground annual obtained at a sum appropriate to the condition of the property, the offer is accepted and the property put into such a condition as will prolong its life for a period of from five to ten years. This course of action is regarded as " buying time " and has resulted in a considerable number of houses being retained in occupancy.

It is still difficult to obtain at first attempt the abatement of nuisances in poor type properties. It is true that care is not always exercised in the use of communal appliances and children tend to insert into the drainage system various items of debris which lead to the chokage of drainage systems but the flooding of backcourts and common passages with sewage for any length of time cannot be regarded as other than a matter for urgent attention.

There are still almost 1,500 tuberculous families awaiting rehousing and during the year a special allocation of permanent aluminium and Blackburn houses was made to the city. The Secretary of State indicated that the primary aim in making this allocation was to secure the building of houses in areas where additional accommodation would be of greater benefit in combating the spread of tuberculosis. It is hoped to accommodate a considerable number of tuberculous families in a proportion of the 1,020 houses allocated to Glasgow and which will be erected during 1949.

Applications for Rent Restriction Certificates under the Rent and Mortgage Interest Restrictions Acts, 1920-1939, amounted to 323 during the year. The following table shows the number of applications from 1938 to 1948 :—

1938	35	1944	81
1939	29	1945	437
1940	3	1946	271
1941	8	1947	672
1942	3	1948	323
1943	51		

Of the 323 applications, 220 were granted, 86 refused, and 17 cancelled. There were 76 applications by house factors for reports, of which 74 were granted, 1 refused, and 1 cancelled.

Statistics of decrowding in relation to houses vacated by families removed to new houses are shown in a table, as follows:—

DECROWDING OPERATIONS.

CONDITION OF VACATED HOUSES SINCE THE COMING INTO FORCE OF THE HOUSING (SCOTLAND) ACT, 1935.

Size of House.	No. of Houses inspected.	Over-crowding removed.	Over-crowding reduced.	Over-crowding unchanged.	Over-crowding increased.
One apartment	6,198	4,635	1,286	171	106
Two apartments	13,791	10,882	2,108	378	423
Three apartments ...	4,337	3,856	279	71	131
Four apartments and up	548	481	33	8	26
Total ...	24,874	19,854 79·8%	3,706 14·9%	628 2·5%	686 2·8

Out of 24,874 houses inspected subsequent to the transfer of the occupants to Corporation houses since the passing of the Housing (Scotland) Act, 1935, 20·2 per cent. were found to be again overcrowded compared with 20·1 per cent. in 1947.

During the year 45 houses were represented by the Medical Officer of Health to the Housing Committee as uninhabitable.

HOUSING ACTS.

NUMBER OF HOUSES REPRESENTED SINCE 1923 AND ACTION TAKEN.

	Number of Houses represented.			Number of these Houses actually closed in each Year.		
Year.	Under Slum Clearance Schemes.	Under Closing and Demolition Orders.	Together.	Slum Clearance Schemes.	Closing and Demolition Orders.	Together.
1917-1937 ...	8,635	8,278	16,913	8,545	7,605	16,150
1938 ...	—	467	467	89	914	1,003
1939 ...	36	275	311	2	347	349
1940 ...	—	157	157	—	213	213
1941 ...	—	52	52	—	74	74
1942 ...	—	4	4	—	13	13
1943 ...	—	46	46	—	47	47
1944 ...	—	19	19	—	19	19
1945 ...	—	13	13	—	12	12
1946 ...	—	26	26	—	26	26
1947 ...	—	274	274	—	127	127
1948 ...	—	45	45	—	155	155
Totals ...	8,671	9,656	18,327	8,636	9,552	18,188

With regard to the rehousing of tuberculous families, 593 recommendations were made to the City Improvements Department during 1948, of which 86 families have since been rehoused. In addition, 240 families recommended in previous years were rehoused during 1948, making in all 326 for the year. This compares with a total of 245 families rehoused in 1947. The results of the scheme for the rehousing of tuberculous families over the past fourteen years are shown in the following table :—

NUMBER OF TUBERCULOUS FAMILIES REHOUSED.

1935 ...	278	1942 ...	69
1936 ...	182	1943 ...	146
1937 ...	125	1944 ...	166
1938 ...	100	1945 ...	124
1939 ...	82	1946 ...	220
1940 ...	52	1947 ...	245
1941 ...	60	1948 ...	326

INSPECTION OF HOUSING SCHEMES.

(*a*) CONDITION AS TO CLEANLINESS.

The number of houses in the various rehousing schemes reported on is 14,769.

No. of tenants under supervision at 1st January, 1948 ...		14,734	
Of which evicted or left owing rent during 1948	18		
Of which left voluntarily during 1948	443		
		461	
Of which remaining at 31st December, 1948			14,273
No. of tenants obtaining entry during 1948		463	
Of which evicted or left owing rent during 1948 ...	—	—	
Of which left voluntarily during 1948	—	—	
Of which remaining at 31st December, 1948			463
Total number of tenants remaining as at 31st December, 1948 ...			14,736

During 1948 the nurse inspectresses made 66,087 primary visits, the condition of the houses being recorded at the time of the visits as " Clean " 42,667, " Fair " 22,339 and " Dirty " 1,081. Further visits numbering 2,223 were made to the less satisfactory tenants.

At the beginning of the year 14,734 households were under supervision and at the end of the year 14,736—an increase of 2. The number of new tenants was 463. There were 461 removals or 3·1 per cent. of the total occupancies.

The changes in the condition of the 14,273 households under supervision throughout the whole year were as follows :—

	Condition at End of Year.				
	Clean.	Fair.	Dirty.	Totals.	Group Percentages.
Condition at beginning of Year—					
Clean	9,224	313	1	9,538	66·8
Fair	427	4,111	44	4,582	32·1
Dirty	2	44	107	153	1·1
Total	9,653	4,468	152	14,273	100·0
Group Percentages ...	67·6	31·3	1·1	100·0	—

A similar table is given for the 463 tenants who obtained entry during the year and who were still resident in the schemes at the close.

	Condition at End of Year.				
	Clean.	Fair.	Dirty.	Totals.	Group. Percentages.
Condition at date of Entry—					
Clean	203	49	—	252	54·4
Fair	34	175	—	209	45·2
Dirty	—	1	1	2	0·4
Total	237	225	1	463	100·0
Group Percentages ...	51·2	48·6	0·2	100·0	—

The condition prior to removal of the houses occupied by families who were evicted or left owing rent and by tenants removing voluntarily during the year is compared in the following table :—

	Tenants evicted during 1948.		Tenants Removing Voluntarily during 1948.	
	No.	Group. Percentages.	No.	Group Percentages.
Condition at date of Removal—				
Clean	2	11·1	314	70·9
Fair	12	66·7	124	28·0
Dirty	4	22·2	5	1·1
Total	18	100·0	443	100·0

Of 14,736 houses occupied at the end of the year, 9,890 were regarded as " Clean," 4,693 as " Fair " and 153 as " Dirty," representing 67·1 per cent., 31·9 per cent. and 1·0 per cent. of the total. The corresponding percentages for occupancies at the end of 1947 were 66·9 per cent., 32·0 per cent. and 1·1 per cent.

(*b*) Bug Infestation.

The total number of houses in which evidence of the presence of bed bugs was found was 146, or 1·0 per cent., as against 1·1 per cent. in 1947. This decrease is insignificant. Analysis of this figure shows that only a " trace " of bed bugs was found in 35 houses or 0·2 per cent. which gives the same percentage as recorded in 1947. In this group of houses only old hatched eggs or bug casts but no living bugs or eggs were found in the beds or on furniture, pictures or other household belongings. In 28 houses or 0·2 per cent. compared with 0·1 per cent. in 1947, a " medium " degree of infestation was found and by this is meant that living bugs or eggs were found in beds or on furniture, pictures or other household belongings but not in the structure of the building itself. This condition is readily remedied by the tenants by applying the ordinary methods of household cleansing under the direction of the nurse inspectresses. In 83 houses or 0·6 per cent. compared with 0·9 per cent. in 1947, a " serious " degree of infestation was found. In these houses living bugs or eggs, or both, were found in beds, on furniture or on picture rails, skirting or door facings. Hitherto, the eradication of bugs in these houses required the co-operation of the tradesmen of the Maintenance Section of the Housing Department whose procedure was to remove the infested woodwork from walls and apply the blow lamp directly or a contact insecticide. Since the establishment of the D.D.T. Disinfestation Unit, it has been found that the proper application of D.D.T. and Gammexane (" 666 ") is sufficient in itself to eradicate infestation of the wall structures without having recourse to the removal of woodwork for the purpose of disinfestation. It will be appreciated that this new procedure causes the minimum of upset in the house while achieving the same results. A feature of the work of the nurse inspectresses is the early detection of infestation and this has been very important in that it has prevented the vermin from establishing themselves for any length of time.

The table submitted herewith shows the progress made during the past fifteen years in the prevention of bug infestation which has fallen from 10·7 per cent. in 1934 to 1·0 per cent. in 1948. It should be noted that serious infestation has fallen during that period from 7·1 per cent. to 0·6 per cent throughout the rehousing schemes. This progress is further proof that the preventative system which has been practised in Glasgow during the past fifteen years is thoroughly sound, as it depends for its success upon the cleanliness of tenants and the supervision of them by the nurse inspectresses who are specially trained in the work of prevention of infestation by the bed bug.

PROGRESS OF BUG INFESTATION PREVENTION IN REHOUSING SCHEMES.

		Number of Houses in which Bed Bugs were found.				Percentage of Total Number of Houses.			
Year.	Number of Houses Inspected.	Trace.	M.I.	S.I.	Total.	Trace.	M.I.	S.I.	Total.
1934 ...	8,670	104	210	612	926	1·2	2·4	7·1	10·7
1935 ...	10,576	218	368	378	964	2·1	3·5	3·6	9·2
1936 ...	12,803	220	296	295	811	1·7	2·3	2·3	6·3
1937 ...	13,676	253	165	304	722	1·8	1·2	2·2	5·2
1938 ...	14,416	138	69	240	447	0·9	0·5	1·7	3·1
1939 ...	14,609	79	62	168	309	0·5	0·4	1·2	2·1
1940 ...	14,669	55	75	185	315	0·4	0·5	1·2	2·1
1941 ...	14,731	51	65	94	210	0·3	0·4	0·7	1·4
1942 ...	14,751	34	61	121	216	0·2	0·4	0·8	1·4
1943 ...	14,769	25	51	120	196	0·2	0·3	0·8	1·3
1944 ...	14,769	21	26	110	157	0·1	0·2	0·8	1·1
1945 ...	14,769	31	21	108	160	0·2	0·1	0·7	1·0
1946 ...	14,769	33	23	105	161	0·2	0·2	0·7	1·1
1947 ...	14,769	30	21	131	182	0·2	0·1	0·9	1·2
1948 ...	14,769	35	28	83	146	0·2	0·2	0·6	1·0

Trace—Trace of Bugs. M.I.—Medium Infestation.
S.I.—Serious Infestation.

BUG EXTERMINATION BY D.D.T.

By Dr. W. C. Gunn.

In the Annual Report of the Medical Officer of Health for 1947 a fairly detailed description of the uses of D.D.T. (Diphenyl-Dichloro-Trichlorethane) and also of Gammexane (Benzene Hexachloride) especially for the eradication of bed-bugs (cimex lectularius) in the slum properties throughout the city, was given.

This work has been continued throughout 1948 even more intensively in an effort to cope with the problem which because of its magnitude will occupy the attention of this Department for some years to come. A D.D.T. Disinfestation Unit was established in the Public Health Department early in 1948 soon after the completion of the investigation for the Scientific Advisory Committee of the Department of Health for Scotland.

A new motor van with a small portable petrol-driven compressor unit greatly facilitated the work and allowed the personnel of the unit to get about the city to the various areas in which the work had to be carried out. Here it may be noted that the duplication of the unit was authorised towards the end of the year and very soon the amount of work completed should be doubled and other problems such as cockroach infestation of houses and of business premises undertaken.

Altogether there are now seven men employed here on the work with two vehicles for their transport. The success of the earlier work has warranted the duplication of the Disinfestation Unit and it is hoped that bug infestation will soon become a diminishing sanitary problem in Glasgow.

So far we have found that a 5 per cent. water emulsion of D.D.T. made down from a 25 per cent. concentrate fulfils our requirements for infested dwelling-houses. It is applied by portable hand sprays or by spray "guns" operated by the small petrol-driven compressor unit fixed to the floor of the motor vehicle. The compressor can be readily detached from its mounting and carried by two men to wherever it is required.

The following table shows the number of apartments disinfested during 1948 and the approximate cost per apartment for material is 3s. 10½d.

TABLE I.

Sanitary Division.	No. of Bug-infested Apartments Treated.	No. of Apartments treated for Tenants being Rehoused.	Total No. of Apartments Treated.	Material Used. 5% D.D.T. Water Emulsion Galls.	Material Used. 10% D.D.T. Powder Lbs.
Eastern ...	509	284	793	461½	175
Central ...	232	68	300	176	70
Northern ...	427	207	634	382	138
South-Eastern	186	257	443	265½	90
South-Western	142	152	294	172	57
Totals ...	1,496	968	2,464	1,457	530

Note.—Northern Division: In addition to the above a common lodging-house in Drygate, consisting of 301 cubicles, was treated during the year. The majority of these cubicles were heavily bug-infested. Disinfestation carried out in June, 1948, and reported "all clear" in December, 1948.

The two Assistant Sanitary Inspectors who began this work in 1946 are still with the unit. This is most important as it ensures the continuity of the standard of work and every effort has been made to prevent any falling off in this high standard. The new men who have been recruited to the Disinfestation Unit have been specially instructed in the bionomics of the insect pest against which they are directing their energies and all of them have considerably more than a superficial knowledge of the subject. It is most certain that the new synthetic insecticides cannot just be handed out to the uninstructed with a hope for the best if good results are to be obtained. Bad handling of these insecticides may only lead to loss of confidence in them which would be utterly wrong.

Many observations have been made throughout the year upon the "residual effect" of D.D.T. and all have shown that this is a most potent factor in killing off individual insects upon which the D.D.T. spray has not landed directly from the spray gun. Even one bug which has walked across a wood surface lightly sprayed with the 5 per cent. water emulsion or over a surface lightly dusted with a 5 per cent to 10 per cent. D.D.T. powder will bring about the death of a dozen or more neighbours when they come into contact with it.

The following note is of interest :—

One adult bug was exposed on 16/12/48 to D.D.T. 10 per cent. powder for ten minutes and then placed with other live bugs in a clean Petri dish.

TABLE II.

Date.	Result.
On 17/12/48—	1 adult bug dead ; 1 nymph badly affected by D.D.T.
20/12/48—	6 adults dead ; (2 of these dead showed incomplete moulting) and 5 nymphs dead.
21/12/48—	No change.
22/12/48—	9 adults and 6 nymphs dead.
23/12/48—	10 adults and 9 nymphs dead.
24/12/48—	11 adults and 11 nymphs dead. Several have died while moulting and have not got free from the moult.
28/12/48—	No further change during the past four days. In another clean Petri dish were control bugs unaffected by starvation during the period 16/12/48 to 28/12/48.

This kind of experiment has been repeated on other occasions with similar results.

Recurrences.—Recurrences of infestation have been conspicuous by their absence, even in old slum properties which were treated as long ago as the late autumn of 1946. In fact the results obtained in these old dwelling-houses are beyond anything that was expected from D.D.T.

Co-operation with Scientific Advisory Council.—A close co-operation has been maintained throughout the year by the Disinfestation Unit and the Disinfestation Sub-Committee of the Scientific Advisory Committee of the Department of Health for Scotland which has shown a most encouraging interest in the work. As a result of this co-operation the Medical Officer of Health was asked by the Scientific Advisory Committee to arrange short courses of instruction on the uses of the synthetic insecticides for sanitary inspectors and others interested in insect pest problems in the western region of Scotland. Lectures and demonstrations were given at the Public Health Department and at the Zoological Department of Glasgow University by Mr. J. A. Downes of the Zoology Staff of the University, Dr. D. M. Williams, Infestation Control, Department of Agriculture of Scotland, and Dr. W. C. Gunn, Public Health Department, Glasgow.

Invitations were sent by the Department of Health to Local Authorities in the South-Western Region of Scotland to send their sanitary inspectors to these short courses of instruction and many availed themselves of this opportunity of obtaining up-to-date information on the recent developments in methods of disinfestation brought about by the introduction of D.D.T. and Gammexane. Representatives of Local Authorities came from Ayrshire, Dunbartonshire, Dumfriesshire, Kirkcudbrightshire, Lanarkshire, Renfrewshire, Clackmannan, Stirlingshire, and Glasgow. Altogether 172 attended including 20 of the Glasgow Nurse Inspectresses.

A supplementary lecture-demonstration was given in the middle of December to the resident factors of the Glasgow Corporation Housing Department at which 70 attended.

The members of each course of instruction were taken to many districts of the city to see demonstrations of heavily infested slum properties being treated by the Disinfestation Unit.

SECTION VII.

BACTERIOLOGICAL LABORATORY.

For over half a century now, preventive medicine has steadily risen to the status of a science by the revelation of the causes of serious epidemic diseases, and by the progressive development of methods of control. The highest aim to-day is the prevention of disease. Laboratory studies and investigations into epidemiology on a large scale, the need for which is demonstrated by the figures below, emphasize by their contribution to the problems involved, the essential alliance—closer now than ever—between the Medical Officer of Health, his health officers and the bacteriologist, in the sustained campaign against infection. Preventive medicine runs hand in hand with social medicine and social pathology, which are concerned with families, groups, and populations rather than with the individual. Bacteriology has a large contribution to make to this newer medicine which nowadays bulks largely in the wide field of interest of the Medical Officer of Health

The figure attained for the number of examinations carried out during 1948, creates a record in the history of the Bacteriological Laboratory, reaching a total of 95,851, which surpasses the record set up for 1947 (88,349) by 7,502, an increase of nearly 8·5 per cent. As in previous years, this large number does not represent the whole of the work done, for in addition, many operations and tests have been performed to investigate new methods, or to improve those already in use. Among these are some to try ways of suppressing organisms which impede the efficiency of the isolation of the gonococcus ; some to improve a toxigenicity test for diphtheria bacilli ; and to examine the haemolytic activity of these organisms ; others to continue the enquiry into the serological differentiation of streptococci. Nor does the figure provide any indication of the relative times consumed in the various investigations, some of which are much more complicated than others, and, in practice, require the combination of many individual tests.

INFECTIOUS DISEASE—EPIDEMIOLOGICAL INVESTIGATIONS

Diphtheria.—The number of positive specimens this year does not differ materially from last year (397 against 389) but the total number of examinations made in the work of diagnosis and control of diphtheria is about one thousand higher. Typing of all strains was continued as usual. Virulence tests and toxigenicity tests were carried out as required. All strains of *C. diphtheriae* are now being examined by a new *in-vitro* test to determine whether or not they produce toxin. Of the 445 strains typed, 397 were from new cases, and of these 122 were classed as *gravis*, 54 as *intermedius*, 142 as *mitis* and 79 as atypical. The subjoined table gives comparative figures for the last few years.

Year	Total No. of Strains	Gravis		Intermedius		Mitis		Atypical	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
1945 ...	1,351	666	49·3	436	32·2	181	13·4	68	5·1
1946 ...	973	447	45·9	214	22·0	194	19·9	118	12·0
1947 ...	389	136	35·0	59	15·1	119	30·6	75	19·3
1948 ...	397	122	30·7	54	13·6	142	35·7	79	19·8

These figures show for the second year in succession the marked diminution in the incidence of diphtheria. The decline in the more dangerous strains, *gravis and intermedius*, has continued. Of the *mitis* and atypical strains, 130 were non-virulent and non-toxigenic, which leaves only 267 virulent strains of *C. diphtheriae* isolated during the year from patients in the City Fever Hospitals. The number of non-toxic strains is higher than in 1947 when there were only 68. The proportion of atypical strains appears to increase with the diminution of diphtheria in the community, as does the non-virulent variety of the *mitis* type.

Enteric Fever.—No epidemic outbreaks, large or small, occurred within the city during the year ; only sporadic cases were encountered. The number of examinations made was rather less than last year. The number of positive findings was also smaller, 115 against 130. The laboratory examined specimens from patients associated with the Kilcreggan outbreak of typhoid fever in September, who were admitted to Glasgow Hospitals. There were 16 positive results from 97 specimens. Cultures from these positive cases, including many from the carrier responsible for the outbreak, were assembled and transmitted for Vi-bacteriophage typing.

From the workmen employed around waterworks, 172 specimens were routinely examined to eliminate any possible source of infection. All these specimens proved negative.

Dysentery.—The increase in the incidence of dysentery in the city noticed towards the end of 1947 progressed during 1948, reaching its zenith in May when 124 new cases came to our notice. This disease, fortunately mild in its effect at present, creates a problem wherever small children are congregated, as in Day Nurseries, which were the source of many specimens. In all, 8,550 samples were examined from suspects and for control purposes. The total number of positive stools was 1,490 from 820 cases. This is the highest number of dysentery cases investigated in the laboratory since 1945 when there were 860. *B. dysenteriae Sonne* was isolated from 434 patients ; *B. dysenteriae Flexner* from 383, and *B. dysenteriae Newcastle* from 3. The following table, which does not of course give the total number of cases of dysentery in the city in any year, shows the relative incidence over a period of eleven years of the different types of infection determined in the laboratory, and also probably gives a fairly accurate indication of the yearly variation of this disease.

Year.	Sonne.	Flexner.	Newcastle.	Shiga.	Schmitz.	Total.
1938 ...	113	23	2	—	—	138
1939 ...	26	65	—	—	—	91
1940 ...	72	107	—	—	—	179
1941 ...	54	57	1	—	—	112
1942 ...	72	61	1	—	—	134
1943 ...	182	70	2	2	—	256
1944 ...	498	273	75	2	1	849
1945 ...	473	139	247	1	—	860
1946 ...	111	109	49	—	—	269
1947 ...	66	18	21	—	—	105
1948 ...	434	383	3	—	—	820

The varying relative incidences of *Sonne* and *Flexner* infections are interesting and the outbreak of *Newcastle* dysentery in 1944 and 1945 is notable. It is hoped ultimately to publish a note on this circumstance. In dysentery, and especially in the *Sonne* infection, it is the convalescent carrier which is probably the most important link in the transmission of the disease.

Entamoeba histolytica was found on three occasions in the examinations of 76 specimens of faeces for Amoebic dysentery.

Food Poisoning and Foodstuffs.—Twenty-five samples of foods and 69 specimens from patients were examined ; in addition 31 samples of foods, including tinned meats, jam and cooking fats were tested for bacteriological contamination. Only sporadic cases of infection with Salmonella food-poisoning organisms occurred in the city during the year ; 35 specimens from 18 patients yielding positive results. None of the food samples examined yielded bacilli in this group, though some showed evidence of heavy bacterial contamination. *Staphylococcus aureus*, which sometimes is responsible for gastro-intestinal upset, was isolated twice, once from a patient and once from food.

Venereal Diseases.—The year's examinations show a decrease of 138 at 43,815, against an increase of over a thousand last year. This appears to indicate that the anticipated decline in the post-war incidence of venereal infection has begun. The tests for syphilitic infections numbered 39,695 and for gonococcal infections 4,120. The former number includes 14,616 of the time-saving screen tests by the Laughlen method now regularly in use for eliminating frank negatives before proceeding further.

Gonococcal culture, using the special medium for transport of material, was carried out on 2,272 specimens from 785 cases, mainly from the City V.D. clinics for females. About two thirds of these were for diagnosis and the remainder for "test for cure." The number of positive cultures was 218, of which 97 confirmed positive or suspicious clinic smears, 121 were found positive when the clinic smear was negative, and in 28 specimens culture proved negative when the clinic smear had been regarded as positive. This service is obviously well worth while.

Trichomoniasis.—All the above specimens (2,272) from women were examined for Trichomonas *Vaginalis*, and in 594 (26·1%) this flagellate was found.

Ophthalmia neonatorum.—This year again a large number of specimens from infected eyes were examined, 655 in all, including 19 by cultural methods made possible by the use of the transport medium alluded to last year. Only 8 were found positive for gonococcus ; 4 by both smear and culture, 3 by smear alone and one by culture alone. Of the 14 cultures negative for gonococcus, 2 yielded the meningococcus (which can only be differentiated from the gonococcus by culture), one yielded pneumococcus and another an enterococcus.

PUBLIC HEALTH—GENERAL CONTROL.

Antenatal—Rh Tests.—Since the initiation in November, 1946, of this service, conducted by the laboratory in co-operation with the Maternity and Child Welfare Department and the Regional Blood

Transfusion organisation, 29,071 samples of blood have been screened for the determination of Rh factor. Of these, 12,846 were tested during 1948, when 48 cases were found during pregnancy to have become sensitized to the Rh factor. The total of Rh negative women discovered among the population examined up to the end of the year was 4,529, representing a percentage of 15·6.

Tuberculosis.—Specimens of Sputum to the number of 7,252 were examined; 1,670 being returned positive.

Other suspected material, urine, gastric washings, cerebro-spinal fluid, pleural fluid, etc., were reported upon largely by means of biological tests. Some of these were examined in connection with treatment by Streptomycin.

Milk Supply.—The number of samples tested biologically for tubercle bacilli was 541. Tubercle bacilli were detected in the city milk supply in only 0·28 per cent. of 347 undesignated samples, which shows an improvement of 1·5 per cent. on last year's figures; and in 1·02 per cent. of 98 designated samples which is a little better than last year's result. Twenty samples of the milk supplied to the schools which were tested were all found to be free from infection with M. tuberculosis.

From other local authorities 76 samples of milk were received, one of which proved tuberculous.

The milk supplies of the city, as well as those sent to schools—803 samples in all—were if anything somewhat better on the whole in bacterial content than on the previous year. The results obtained with hospital supplies (319 samples) were also satisfactory, and with graded milks (1,066 samples) there was no undue deviation from the usual standard.

To control the efficiency of the cleansing of milk bottles by various methods in use, 234 were examined and 80 per cent. conformed to the standard employed. Recent examinations point to continued improvement.

Ice cream.—Ice cream is now regularly tested for bacteriological contamination as a measure of control of the purity of this popular food. Eighty-six samples were examined in the year for the food inspectorate. The average bacterial counts classified according to the standards of designated milks were as follows.

No. of Samples.	Count per ml. at 37°C.
58	0— 30,000
16	30,000— 200,000
4	200,000—1,000,000
8	over a million

In 10 samples (11·5%) coliform bacilli were present in 1/100 ml. As regards bacterial content, 86 per cent. of the samples conform to a good standard of purity.

City Water Supply.—675 samples from the reservoirs and other sources were examined during the year. The average bacterial counts in the water supplied to the mains is shown in this table.

Source	No. of Samples	Average count per ml. at 37°C.	Average count per ml. at 22°C.
From Loch Katrine	128	9	22
Gorbals supply	48	10	16

In 3 samples only of the Katrine supply coliform bacilli (not faecal Type I) were found in 50 ml. quantities. Coliforms were not found in the Gorbals samples. The standard of purity is high.

Public Baths Water.—The results of examination of 303 samples from the swimming ponds were reported to the Baths Department, providing necessary information for the control of filtration and chemical treatment.

In addition to these routine examinations 36 samples were examined in a preliminary investigation to compare the efficiency of the newer " break-point " chlorination method with that hitherto in use. The " break-point " chlorination method is a type of scientifically controlled super-chlorination in which unnecessary excess of chlorine can be avoided. The " break-point " is that at which the chlorine demands of the water are satisfied and beyond this point any free chlorine is available for bactericidal action. Little is needed because it is not expended in satisfying other demands. The results of this investigation would appear to show that this newer method has distinct advantages over the older process.

Anthrax.—Nine samples of hair and two of goatskins coming through the Port were examined biologically for the Anthrax bacillus. Results in all specimens were negative. No case of the disease came to the notice of the laboratory during the year.

Plague.—Examinations of various species of rats from the harbour and adjacent buildings and from ships were carried out routinely as usual. During the year 501 rats were examined for evidence of infection with *B. pestis*, all with negative results.

ORIGINAL INVESTIGATIONS.

Diphtheria.—A recently introduced culture method of determining the toxicity of *C. diphtheriae* has been investigated. A modification of the original procedure, giving better results in our hands, has been introduced, and over 200 strains of diphtheria bacilli have been tested. The results have been correlated with parallel biological tests for virulence and complete accordance obtained. This new method in practice will ultimately save time and expense in proving the toxicity or not of any particular strain of *C. diphtheriae.* Some such investigation is increasingly necessary at a time when non-virulent and non-toxigenic strains are common. Early knowledge of these types can often reduce the length of hospitalisation of patients. A note on this work has been prepared for publication.

Work has also been done on the haemolytic properties of the types of C. diphtheria common to the Glasgow area.

Gonococcal cultures.—At one time this work was jeopardised by the presence of a persistant contaminant which interfered with the isolation of the gonococcus. It was found that an ingenious method of modifying the environment by control of the humidity of enclosed receptacles prevented the overgrowth of cultures by contaminants of this sort. A paper on this work was read at the December meeting of the Pathological Society of Great Britain and Ireland.

Streptococcal Infections.—The investigation being pursued has resulted in establishing that the differentiation of streptococci by means of a complement-fixation test is feasible, and progress along these lines is now being made.

Cleansing of Milk Bottles.—An investigation at some length involving the examination of about 600 milk bottles in relation to the various methods of cleansing in commercial use has been conducted. A paper embodying the results has been published.

There is delay in the publication of articles owing to the paper shortage, so that some of the work described in the contributions listed below was completed before the beginning of the year under review.

PUBLICATIONS.

Primary Meningococcal Conjunctivitis in Children. R. D. Stuart and Doris McWalter. (1948). Lancet I. 246.

A Standard Modification of the Laughlen Test for Syphilis. John S. Stevenson. (1948). J. Clin. Path. I. 162.

Centralised Gonococcus Culture for Dispersed Clinics. Mary Moffett, Jean L. Young and R. D. Stuart. (1948). B. Med. J. II. 421.

The Value of Liquoid for Blood Culture. R. D. Stuart. (1948). J. Clin. Path. I. 311.

A Bacteriological Investigation into the Cleansing of Milk Bottles. M. S. Brooke. (1948). Glas. Med. J. XXIX. 402.

Note on the Recognition of Toxigenic Strains of C. diphtheriae in vitro. H. S. Carter and W. Wilson (1949). Glas. Med. J. XXX. 43.

SUMMARY OF EXAMINATIONS FOR THE YEAR 1948.

CITY OF GLASGOW. INFECTIOUS DISEASES.

		Positive	Total
Diphtheria and General Throat Infections—			
Diphtheria	Suspects	302	9,422
	Control	445	1,562
	Typing	—	738
	Virulence	—	201
	Toxigenicity Tests	—	225
Streptococcal Infections	Suspects	136	665
Gastro-Intestinal Infections—			
Enteric Fever	Suspects	24	475
	Control	91	733
	Water Works	—	172
Food Poisoning	Foodstuffs	—	25
	Specimens from patients	—	69
	Rats for Salmonella food-poisoning group	—	19
Dysentery—Bacillary	Suspects	925	4,226
	Control	565	4,324
	Amoebic	3	76
Other Forms—	Giardia, etc.	—	18
Tuberculosis	Sputa	1,670	7,252
	Other specimens	—	499
Carry forward			30,701

		Total
	Brought forward	30,701
Venereal Diseases	Wassermann Test	18,479
	Precipitation Test	14 616
	Kahn Test	6,166
	Gonococcal Smears, Cultures and Complement Fixation	3,465
	Colloidal Gold Test	235
	Protein Tests	199
	Ophthalmia Neonatorum	655
Miscellaneous Examinations—		
	Blood: Rh. Factor	12,846
	Blood Groups	628
	Blood	105
	Body Fluids	204
	Exudates	71
	Excretions	18
	Vincent's Organisms	330
	Trichomoniasis	2,272
	Worms	31
	Insects	4
CITY OF GLASGOW. GENERAL PUBLIC HEALTH.		
City Milk Supplies		2,334
Hospital Milk Supplies		319
Milk Bottles, Ice Cream, etc.		365
Water Supplies		529
Baths Department		303
Bath Water—Extra specimens		36
Water Department		146
Foodstuffs examined for fitness for consumption		17
Lubricating Oil		1
PORT HEALTH AUTHORITY—		
Anthrax—Hair 9, Hides 2		11
Water—General Bacteriological Examination		2
Urine for organisms		1
Plague—Rats		501
Foodstuffs examined for fitness for consumption		3
Fat Substitutes, Greasing Emulsions, etc.		11
H.M. AND ALLIED FORCES—		
Venereal Diseases		94
Tuberculosis		1
Diphtheria		15
Haemolytic Streptococci		4
Vincent's Organisms		1
Urine for organisms		2
Worms		3
OUTSIDE AUTHORITIES—		
Diphtheria		23
Dysentery		14
Enteric Fever		4
Tuberculosis		3
Undulant Fever		3
Worms		3
Leptospirosis—Schüffner Test		1
Milks		76
		95,851

CONTROL.—Specimens from hospital cases, contacts, etc.

SECTION VIII.

FOOD.

Food Poisoning.—During 1948, there were 15 notified outbreaks of acute illness attributable to the consumption of food. The total number of persons affected was 72, of whom one died. The corresponding figures for 1947 were 20 outbreaks and 61 patients with no deaths.

The number affected in each outbreak varied from 1 to 40, the distribution being as follows :—

1 patient —8 outbreaks.
2 patients—1 outbreak.
3 ,, —2 outbreaks.
4 patients—2 outbreaks.
8 ,, —1 outbreak.
40 ,, —1 ,,

It will, therefore, be noted that in more than one-half of the outbreaks the incident was limited to a single patient, and that the majority of patients were accounted for by a single outbreak. This shows some variation from 1947 when a single case occurred in only six outbreaks out of 20, and when the largest number of patients in any one outbreak was nine.

Seasonal Distribution.—There was one outbreak in each of the months January, July, September and November, two each in May and June, three in August, and four in October.

Types.—Classified according to causal agent, the outbreaks were of two types, viz., specific and non-specific.

1. *Specific Group.*—In ten outbreaks, comprising 13 patients, the illness was found to be associated with a Salmonella organism. In every case, this proved to be S. Typhi-murium which was isolated from the faeces of all 13 patients but from no other source. The distribution of the 13 patients was one in eight outbreaks, two in one outbreak, and three in one outbreak.

2. *Non-Specific.*—In the remaining five outbreaks, comprising 59 patients, no specific organism was isolated, and the causal agent was

considered to be a toxin. This group included the largest single outbreak of 40 cases. The distribution of the 59 patients was three in one outbreak, four in two outbreaks, eight in one outbreak, and 40 in one outbreak.

Vehicle.—In the majority of outbreaks, the cause of infection remained untraced, and it so happens that in this respect also, the outbreaks can be divided into the same two groups as above.

1. *Specific.*—In the ten outbreaks caused by S. Typhi-murium, no article of food could be incriminated and so the cause remained undiscovered. This was due in every case to the time lapse between the incident and its notification, in consequence of which no specimens of suspected foods were available for examination. In two cases, the infected food was probably consumed elsewhere than in Glasgow ; one patient sickened almost immediately after arriving home from holiday in England, while the other, a commercial traveller with frequent changes of location, was resident outwith the City but was admitted to and died in a Glasgow nursing home.

2. *Non-Specific.*—In the other five outbreaks, the vehicle was identified by a process of elimination. The foodstuffs incriminated were, respectively, tinned peas, tinned salmon, brown fruit loaf, bread sauce and steak pie. Of these, the fruit loaf may be considered a doubtful or at least unusual vehicle for an enterotoxin ; but although no suggestive organisms were detected bacteriologically in the specimen available, the onset of illness three hours after its consumption in four people out of five, while the only non-consumer remained well, must be taken as strong presumptive evidence, especially as the only other constituent of the meal (supper) was a cup of tea. From the other four foodstuffs mentioned, Staphylococci of two varieties were isolated, two being aureus (both coagulase-positive) and two albus (both coagulase-negative).

Selected Outbreaks.—The following are short descriptions of some of the 15 outbreaks :—

1. *Specific Group.*—Out of two families in the same house totalling 12 persons, a father (26 years) and his two children (5 and 2 years) sickened at intervals of two days and four days with vomiting and diarrhoea. The children were removed to hospital and from the faeces of all three patients S. Typhi-murium was isolated. No foodstuff common to all three that was not shared by the other inmates of the

house could be definitely identified. The other nine inmates including the mother remained well and symptomless, and no associated illness could be traced among other customers of shops from which the family obtained all their detailed articles of diet. The reservoir and vehicle of infection in this illness affecting three individuals out of 12 remain, therefore, untraced, and the incident is, from the data which were obtainable, difficult of precise explanation.

The features of the nine other outbreaks in this group were essentially similar, but one deserves special mention because of its unique circumstances. An adult male aged 66 was admitted to a medical ward of a general hospital on 30th August suffering from coronary thrombosis. He was treated for six weeks, during which time he was on controlled light diet in common with most of his fellow-patients. The only " carried-in " article in his dietary was biscuits. On 12th October, he sickened with vomiting and diarrhoea. From his faeces, S. Typhi-murium was isolated, and this finding was repeatedly confirmed at the fever hospital to which he was transferred on 14th October. Contact examination of faeces from all patients in the ward proved negative for Salmonellae but two were found positive for B. dysenteriae Flexner.

2. *Non-Specific Group.*—A family of six adults had lunch, of which one constituent was tinned peas. About 1½ hours later, four members of the family sickened with nausea, vomiting, diarrhoea and abdominal pain. Of the two members who remained well, one ate no peas, while the other, after eating only a few peas, rejected the rest because they tasted sour. The symptoms in the four patients were of short duration. Examination of faeces from one patient and also of the few peas recovered was negative for specific organisms, but from the peas, coagulase-positive staphylococcus aureus was recovered. All the circumstances of this illness suggest that it was due to an enterotoxin. A similar agent was probably the cause of another outbreak noted above in four out of a family of five, following the ingestion of brown fruit loaf.

A family of three adults and one child had their evening meal consisting of bread and butter, tinned salmon and tea. About 3-4 hours later, the three adults sickened with abdominal pain, diarrhoea and, in two instances, vomiting. The child, who had eaten no salmon, remained well. No specimens could be obtained for examination, but the information elicited suggested that the agent in this outbreak also was a bacterial enterotoxin.

The largest outbreak affected 40 out of 52 guests at a wedding reception. The affected persons sickened in varying degree from 3 to 15 hours after the wedding feast. The majority had abdominal pain and diarrhoea, but a few had nausea and vomiting also. Some were sharply ill, while others were only moderately or mildly affected. The symptoms were transient and in only two cases did they persist longer than 12 hours, although a number of guests experienced weakness for a few days afterwards. Examination of faeces in one case and, at a later date, of the blood serum in two others, proved negative for specific organisms. Investigations among 30 available guests suggested that the most likely vehicle was the bread sauce served with the main course, but as this had all been disposed of, no specimen was obtainable for examination. A similar sample of bread sauce, however, taken from the same source, was later examined bacteriologically and from it coagulase-positive staphylococcus aureus was isolated. Although none of the findings was conclusive, this illness was probably caused by the elaboration and diffusion in the prepared bread sauce of a non-specific bacterial product with enterotoxic properties.

In the following notes the chief food inspector reports on the administration of the statutory enactments during the year.

SUMMARY OF OPERATIONS UNDER THE FOOD AND DRUGS (ADULTERATION) ACT; THE MILK AND DAIRIES ACTS; AND ALLIED ACTS, ORDERS AND REGULATIONS FOR THE YEAR ENDED 31ST DECEMBER, 1948.

The Food and Drugs (*Adulteration*) *Act*, 1928.—Operations in connection with this and other Acts and in connection with Ministry of Food Regulations were carried out over the year. On reviewing the work of the twelve months it is observed that there is a close similarity with that of the past year. It can be said that the law generally is well observed in the city by traders and adulteration may be regarded as nearly in the region of the exceptional. There are few cases of deliberate food fraud and many offences are due to carelessness. The oversight observed by the officers of the Department too has good effect and their work has a definite bearing on the situation. In 24 instances proceedings were taken under the Food and Drugs (Adulteration) Act, 1928, the same number as last year, which was the lowest recorded for any year. This gives good reason for satisfaction. Because of rationing and of scarcity the procuring of samples for examination is attended with difficulty. A total of 159 different articles of food and drugs were obtained for analysis over the year.

4,950 samples were examined by the Public Analyst ; of these, 1,291 were formal and 3,659 informal, 34 (2·63 per cent.) of the former and 75 (2·05 per cent.) of the latter were found adulterated. The previous year showed 32 (2·44 per cent.) formal samples and 77 (2·28 per cent.) informal samples not to be genuine. The number of proceedings instituted equalled 24 and 20 convictions were recorded—penalties amounted to £70. There were no infringements in connection with the sale of margarine. Of cases dealt with two were second offences and one was a fifth offence. In addition, two convictions resulting in fines of £10 in each case were obtained in the Sheriff Court for contraventions of the Meat Products and Canned Meat (Control and Maximum Prices) Order, 1948. These offences consisted of the sale of sausages with a deficiency of meat content. Other six similar charges against traders were deserted by the Sheriff Fiscal as these were closely related with the two firms which had already been convicted.

Abstract of Total Samples Examined during 1948.

Article.	Informal.		Statutory.		Percentage adulterated.		Percentage of Samples taken in each Group to Total.	
	No. Taken	No. Non-Gen.	No. Taken	No. Non-Gen.	Infor. %	Stat. %	Infor. %	Stat. %
Milk	2,448	29	896	7	1·18	0·78	66·90	69·40
Milk Products (Butter, Cheese, etc.)	6	—	25	—	—	—	0·16	1·94
Meats and Meat Food Products	315	21	136	26	6·67	19·12	8·61	10·54
Cereals, etc.	74	5	61	—	6·76	—	2·02	4·73
Spirituous Liquors ...	15	—	7	1	—	14·29	0·41	0·54
Drugs	365	13	10	—	3·56	—	9·98	0·76
Flavourings and Condiments	102	—	23	—	—	—	2·79	1·79
Miscellaneous Foods ...	334	7	133	—	2·10	—	9·13	10·30
	3,659	75	1,291	34	2·05	2·63	100·00	100·00

ABSTRACT OF INFORMAL AND STATUTORY SAMPLES OF SWEET MILK EXAMINED DURING YEAR 1948.

Month.	Informal.				Statutory.			
	No. examined.	No. Non-Gen.	Average percentage Composition.		No. examined.	No. Non-Gen	Average percentage Composition.	
			Fat. %	Non-Fat. %			Fat. %	Non-Fat. %
January ...	211	3	3·71	8·69	74	—	3·66	8·67
February ...	218	5	3·71	8·62	74	2	3·58	8·62
March... ...	223	3	3·74	8·63	69	—	3·63	8·61
April	223	3	3·66	8·58	80	2	3·55	8·55
May	200	6	3·56	8·74	80	—	3·49	8·66
June	229	5	3·65	8·80	79	—	3,53	8·80
July	166	1	3·71	8·68	65	—	3·61	8·81
August ...	203	2	3·66	8·66	70	—	3·66	8·70
September ...	187	—	3·93	8·68	69	—	3·80	8·70
October ...	203	1	3·98	8·74	75	2	4·06	8·66
November ...	202	—	3·91	8·72	80	1	3·84	8·76
December ...	179	—	3·83	8·67	80	—	3·73	8·68
	2,444	29	3·75	8·68	895	7	3·68	8·68
Percentage Adulterated	1·19	—	—	—	0·78	—	—	—

Artificial Cream Act, 1929.—There are no manufacturers or dealers in the City registered with the Food and Drugs Authority.

The Public Health (*Preservatives, etc., in Food*) *Regulations.*—The number of contraventions of these Regulations during the year was 18 compared with 6 last year. The foodstuffs concerned were Butchers' mince, sausages and sauces. Seven samples of mince were found to contain preservative during the prohibited period, October to May, and two samples of mince were found with an excess of preservative during the permitted months, June to September. Five samples of sausages were found with an excessive amount of preservative as also had four samples of sauce. The following list shows the foods in which preservatives were found along with their nature and amount. It will be seen from the list that one sample of sausages contained 2,644 parts sulphur dioxide per million and one sample of mince 3,270 parts. Apart from these and the other cases dealt with by the Magistrate the amount of preservative found was not excessive.

ABSTRACT OF ARTICLES OF FOOD IN WHICH PRESERVATIVES, ETC., WERE FOUND, AND THE NATURE AND AMOUNT DURING YEAR ENDED 31ST DECEMBER, 1948.

Nature of Article.	Number examined.	Number in which Preservatives, etc., were found.	Nature of Preservative, etc.	Parts per Million. Highest.	Parts per Million. Lowest.
Aerated and Mineral Waters	29	2	Sulphur Dioxide	217	38
Apricot Puree ...	1	1	,,	102	
Baking Powder ...	25	1	Fluorine	8	
Barley	8	1	Sulphur Dioxide	76	
Cherries, Glace ...	2	1	,,	100	
Cider	1	1	,,	108	
Currants	10	1	,,	25	
Fruit Juice	2	2	,,	32	25
Fruit Wine	4	1	Benzoic Acid	407	
Gelatine	12	12	Sulphur Dioxide	768	153
Icing Sugar	1	1	,,	29	
Jam	9	2	,,	32	28
Jelly Crystals ...	3	1	,,	64	
Margarine	30	30	Boron	0·25%	0·06%
Mince	74	25	Sulphur Dioxide	3,270	32
Onions, Dried ...	1	1	,,	25	
P.O.M.	1	1	,,	115	
Peaches, Dried ...	4	4	,,	576	128
Raisins	8	1	,,	256	
Rice Substitute ...	2	1	,,	89	
Sago	9	1	,,	64	
Sauces	56	1	,,	200	
		10	Benzoic Acid	429	146
Sausage Meat ...	2	2	Sulphur Dioxide	103	96
Sausages	204	123	,,	2,644	6
Sultanas	7	1	,,	109	
Tapioca	5	1	,,	179	

The Milk (*Special Designations*) *Orders* (*Scotland*), 1936-1944.—Samples of Certified and Tuberculin Tested milk are taken for examination throughout the year and of these, numbering 346, 78 were examined biologically. None was found positive for tubercle. This is satisfactory and occurring again this year would appear to endorse the policy of the Government in introducing the Milk (Special Designations) Bill which will only permit the sale of a designated milk. On the other hand, 20 of 63 samples taken from standard herds and examined biologically disclosed one sample as positive. It is not uncommon to get positive samples from standard herds and it is to be regretted that milk from single standard herds is to be exempted for five years from the terms of the Bill.

There are 11 Pasteurising and 12 Heat Treatment plants licensed in the City by the Local Authority, an increase of one in the former and a decrease of one in the latter. Premiums are paid to the licencees by the Ministry of Food. Regular inspections are made of these establishments by the officers of the Local Authority, and a large number of samples are taken. Licencees are notified by letter regarding the results and reports are sent through the Town Clerk to the Department of Health and the Ministry of Food on special forms furnished for this purpose.

The various grades of designated milk dealt in by Registered dairymen in the City are shown in the following table along with the average daily amount sold. The number of producers, dealers, pasteurising, heat treatment and bottling establishments licensed in terms of the Milk (Special Designations) Orders is also given.

	1948.	1947.	1946.
CERTIFIED—			
Producers	1	—	1
Dealers	313	247	237
Total Average Daily Sales (Gallons)	2,305	1,871	1,752
TUBERCULIN TESTED—			
Producers	18	14	13
Bottling Establishments	6	6	6
Dealers	518	518	497
Total Average Daily Sales (Gallons)	*3,148	†3,062	‡2,948
STANDARD—			
Producers	9	10	13
Bottling Establishments	—	—	—
Dealers	—	—	—
Total Average Daily Sales (City Producers only) (Gallons)	439	517	630
PASTEURISED—			
Pasteurising Establishments	11	10	10
Dealers	650	627	548
Total Average Daily Sales (Gallons)	62,448	57,568	54,357
HEAT TREATED—			
Heat Treating Establishments	12	13	12
Total Average Daily Sales (Gallons)	19,856	16,856	14,793

* Includes 888 gallons Tuberculin Tested (Pasteurised).
† „ 823 „ „ „
‡ „ 695 „ „ „

Samples of the foregoing taken during the year numbered 1,067. All were submitted to the City Bacteriologist and the City Analyst for examination regarding their conformity with the requirements of the Orders. In the following table the results are set out in detail :—

RESULTS OF EXAMINATIONS OF DESIGNATED MILKS.

	CERTIFIED. (*a*) Not more than 30,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/10 ml.	TUBERCULIN TESTED. (*a*) Not more than 200,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/100 ml.	STANDARD. (*a*) Not more than 200,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/100 ml.
BACTERIOLOGICAL EXAMINATIONS—			
Number examined	172	174	63
Number conforming to all requirements	128	147	51
Number exceeding count only	17	11	7
Number exceeding count and having coliforms present	6	5	2
Number conforming to count but having coliforms present ...	21	11	3
Agar Count per ml. Highest	1,000,000+	1,000,000+	1,000,000+
Agar Count per ml. Lowest	100	500	500
Presence of Coliforms —	145	158	58
Presence of Coliforms + ...	27	16	5
CHEMICAL EXAMINATION—			
Fat Minimum 3% Number 3% or over	172	174	62
Fat Minimum 3% Number below 3%	—	—	1
Average Butter Fat content	3·87	4·00	4·08

	TUBERCULIN TESTED (PASTEURISED). (*a*) Not more than 30,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/10 ml. (*c*) Not more than 2·3 Lovibond Blue Units (Phosphatase Test).	PASTEURISED. (*a*) No Coliform Bacillus in 1/100 ml. (*b*) Not more than 2·3 Lovibond Blue Units. (Phosphatase Test).	HEAT TREATED. (*a*) Not more than 2·3 Lovibond Blue Units (Phosphatase Test). (*b*) No Decolorisation prior to 12 noon on day following taking of sample.
Number examined	52	290	316
Number passing each Test	42	269	266
Number failing in one or more of the Tests	10	21	50
Milk-Fat Test No. Satisfactory	51	269	315
Milk-Fat Test No. Unsatisfactory	1	—	1
Average Butter Fat content	3·64	3·69	3·65

The tables show that 84·63 per cent. of the samples examined were in compliance with the required standards, as compared with 84·49 per cent. last year. Chemical examination showed all except three samples, which were slightly deficient in fat, to consist of genuine milk.

Supplies of Designated Milk to Corporation Hospitals, etc.—Observation was made of these supplies as usual during the year and though the hospitals have now been taken over by the Western Regional Board sampling of the milk supplies is still being carried on at all the larger hospitals in the City. Two hundred and fifty-eight samples of Tuberculin Tested milk were examined by the plate count and 201 conformed with the Regulations. This shows a percentage of 78 which is 3 per cent. lower than last year. Of 60 samples of Pasteurised milk, 45 were satisfactory. Three of 331 samples chemically examined were found below the standard set by the Sale of Milk Regulations. The average fat content was 3·80 per cent. and this can be considered as satisfactory.

Examination of Ordinary Market Milk for the Presence of Tubercle.—Sampling of milk arriving at dairies in the City was carried out during the year. Of the samples taken, 267 were examined biologically by the City Bacteriologist. Of these two were found to be tuberculous. This shows a percentage of 0·75 compared with a percentage of 1·08 in the previous year. Again this year shows a fall in the incidence of tubercle in the milk and lowers last year's record low figure. The clearing out of infected animals from dairy herds continues to make excellent progress and these figures give confirmation. The quantity of milk from tuberculin tested cows coming to the City increases each year and should soon be 100 per cent. The following table gives the figures for the year along with the figures for the two previous years. The county where the milk was produced is also given.

SAMPLES OF PRODUCERS' SUPPLIES

EXAMINED FOR THE PRESENCE OF TUBERCLE.

	1948		1947		1946	
County.	No. Examined.	No. Tuberculous.	No. Examined.	No. Tuberculous.	No. Examined.	No. Tuberculous.
Ayr	138	—	186	1	141	3
Dunbarton ...	9	—	13	—	6	1
Lanark	90	2	45	2	83	—
Renfrew	14		21	—	47	2
Stirling	16	—	14	—	14	2
	267	2	279	3	291	8

Bacterial Counts of Ordinary Market Milk Supplied to the City.—Three hundred and eighteen samples were examined for the number of bacteria and the presence of coliform bacillus. The results are shown in the following table :—

Bacterial Counts of Ordinary Market Milk Supplied to the City.

Number Examined	Average Number of Bacteria per ml.					Coliforms in 1/100 ml. (2 days).	
	Under 100,000.	100,000 to 200,000.	200,000 to 500,000.	500,000 to 1,000,000.	Over 1,000,000.	−	+
318	274	14	15	6	9	275	43

Viewed from the number of bacteria found, 219 (79·93 per cent.) of the 274 samples with less than 100,000 bacteria per millilitre were of certified quality, compared with 207 (79·92 per cent.) of the 259 with less than 100,000 in 1947. Two hundred and eighty-eight (90·57 per cent.) of the total number of samples taken were equal to Tuberculin Tested quality, compared with 280 (88·05 per cent.) in 1947. Coliforms were absent in 275 (86·48 per cent.) compared with 280 (88·05 per cent.) in 1947. Three hundred and seventeen samples were also submitted for chemical analysis ; 19 were found low in non-fatty solids. The average fat and non-fat content of the samples was 3·76 and 8·71 per cent. respectively.

Raw Milk as Retailed in the City.—Eighty-five samples of raw milk as retailed were taken from shops and carts. None of 34 samples examined was found positive for tubercle bacilli compared with none of 29 last year. Any adverse result received is communicated to the Medical Officer of Health for the district where the milk was produced, and steps are taken meanwhile to prevent the sale of infected milk. The sale of raw milk in the City decreases in quantity each year.

All samples were examined for the number of bacteria and the presence of coliforms. Results are detailed in the following table :—

Bacterial Counts of Raw (Untreated) Milk as Retailed in the City.

Number Examined.	Average Number of Bacteria per ml.						Coliforms in 1/100 ml. (2 days).	
	Under 30,000	30,000 to 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	−	+
85	59	13	5	4	1	3	77	8

Milk to School Children.—Only milk of pasteurised quality is supplied to the schools. The milk is supplied by four contractors and is sampled regularly. One hundred and sixty samples were examined during the year in terms of the Milk (Special Designations) Orders. Fifteen failed in one or other of the two tests.

Below is shown a table giving a summary of results of the sampling. Another table shows the average daily quantity supplied, computed on a monthly basis, along with the number of school days which occurred in each month. There was an increased consumption this year of 6,124 gallons.

SCHOOL MILK (PASTEURISED).

No. Examined.	No. passing both Phosphatase and Coliform Tests.	No. failing Phosphatase Test only.	No. failing Coliforms Test only.	No. failing both.	No. Tuberculous.	Average Fat Solids.	Average Non-Fat Solids.
160	145	3	12	—	—	3·68	8·65

AVERAGE DAILY QUANTITIES SUPPLIED.

Month.	Gallons.	School Days.	Month.	Gallons.	School Days.
January ...	6,328	20	July	1,657	12
February ...	6,482	20	August ...	1,949	20
March ...	6,642	18	September ...	6,622	21
April... ...	6,620	20	October ...	6,585	21
May	6,385	20	November ...	6,440	20
June ...	6,222	22	December ...	5,692	20

Milk Summary.—A number of the samples taken of Certified and Tuberculin Tested milk (78 of 346) were examined for the presence of tubercle. The freedom from tubercle of milk from tuberculin tested herds is reflected in the fact that no sample was found positive. One tubercle positive result occurred in a sample of Standard milk out of 20 examined. This confirms the good sense in the Government's intention to cancel this grade in five years' time. It may be stated that the position regarding milk treatment in the City is such that Glasgow could be made a specified area in terms of the Milk (Special Designations) Bill with a minimum of inconvenience.

An additional Pasteurising Establishment was licensed during the year. This was a transfer from a Heat Treatment licence. There was an increase of 5,000 and 3,000 gallons respectively to last year's figures for Pasteurised and Heat Treated milk sold in the City. The supply of dairy plant is still backward and slow delivery is holding up the plans of different dairymen.

Four new Tuberculin Tested licences were issued to City producers in respect of their dairy herds and there is one Standard licence less. The Ministry of Food's policy of paying premiums for quality milk still continues and assists in encouraging better milk production and handling. The average daily consumpt of milk in the City is around 95,000 gallons and approximately 95 per cent. of this is pasteurised or heat treated. Certified and Tuberculin Tested milk is included in the 5 per cent. sold as raw or untreated milk. Two hundred and sixty-seven of 318 samples of milk taken from producers supplying City dairies were examined for tubercle and two were found positive. This gives a percentage of 0·75 compared with last year's figure (the lowest recorded up to then) of 1·08 per cent. This is very satisfactory and may be accounted for by the fact that 82 per cent. of the milk in this area of the Scottish Milk Marketing Board is of Tuberculin Tested quality.

Around 68,000 gallons of milk were supplied to schools over the year which is an increase of between six to seven thousand gallons from last year. Samples are taken twice monthly from each of the four contractors and results have been found satisfactory. No sample examined was tuberculous and the average butter fat content was 3·68 per cent.

New dairy bye-laws to apply generally throughout Scotland are in course of preparation by the Department of Health. The Society of Medical Officers of Health and the Sanitary Inspectors' Association, among others have been asked to submit their views.

There are 1,413 registered dairies in the City. Forty-five of these are producers' premises.

Milk is sold exclusively in bottles by over 70 per cent. of the City dairies and it is hoped to further increase this number. Formal and informal samples of milk taken over the year totalled 3,344 and the average fat content equalled 3·71 per cent.

Inspection of Food and Food Premises.—Ten thousand, four hundred and ninety-three inspections of markets, stores, shops and places where food is dealt with were carried out. Two thousand, three hundred and eighty lots of food were submitted for reconditioning, passed as suitable only for animal food or destroyed. The total quantity equalled 91 tons 4 cwts. 71 lbs., and consisted chiefly of canned foods, as follows :—

> Meat, milk, fish, vegetables and fruit ; also fresh vegetables, cereals, biscuits, dried fruit and other miscellaneous articles.

Inspection of these food premises disclosed in some instances the necessity for repairs, cleansing and limewashing. These matters were brought to the notice of the persons concerned, verbally or by intimation, and in all cases the work was carried out.

The Glasgow Street Trading Bye-laws are now in operation and close co-operation is being observed between the Public Health Department and the Chief Constable. The names and addresses of all street traders who apply for a permit to sell foodstuffs are submitted by the Police Registrar to the Medical Officer for a report on the suitability of the proposed storage accommodation. A very large number of applications have been dealt with and a good many have been disapproved. These Bye-laws should become most helpful and will prevent the sale in the street of puff candy and other substances prepared often under somewhat doubtful conditions in the sellers' dwellings.

In connection with the Public Health (Meat) Regulations (Scotland) 1932, ten renewals of registration were granted and certificates of approval issued in respect of them. Thirty-eight copies of certificates were provided for vehicles operating from these premises.

Fertilisers and Feeding Stuffs Act, 1926.—Twenty samples of feeding stuffs and three samples of fertilisers were obtained from farmers and dealers in the town and handed to the Agricultural Analyst for examination. Three samples of feeding stuffs were found deficient in oil, one of these having a considerable excess of albuminoids. One other sample had a large excess of oil, another an excess of fibre with an excess of protein and a deficiency in fibre in the remaining sample. The remaining 17 samples were in accordance with the Regulations. Non-complying samples were notified to the sellers in every case and explanations have been received. All results were reported as is required to the Department of Agriculture and Fisheries.

Dairies.—Dairies on the register at the end of the year numbered 1,413 compared with 1,425 last year which is a decrease of 12. This number consists of the following :—45 producers, 14 wholesalers, 38 wholesale and retail dealers, 331 retailers of loose milk, 975 retailers of bottled milk only, and 10 carts from without the district. A qualified certificate of registration is granted where milk is supplied only in properly capped and sealed bottles as received from the wholesaler. This certificate is granted where the shop does not fully satisfy the terms of the dairy bye-laws. The percentage of these dairies is 69·00 of the total number registered compared with 61·69 per cent. in 1947. During the year 15,789 inspections were made of dairies and 35 contraventions were dealt with. In 36 instances repairs and alterations were carried out as requested.

There were no proceedings taken against any dairymen for contravention of the dairy bye-laws nor were any proceedings taken under the Milk and Dairies (Scotland) Order, 1934, the terms of which were generally well observed.

Byres.—There are 45 producers in the City with 57 byres. Four hundred and twenty-eight inspections were made of these byres which were found to be generally well kept. Repairs were carried out in four instances and five contraventions of the bye-laws corrected. There is provision for 1,458 cows in the byres and the average number kept is 1,087. Only in one instance are no grazing facilities provided for the herd.

Exempt Persons.—There are seven byres in the City where persons keep cows for their own use. The number kept averages 11. In addition, the Western Regional Board have two attested herds within the City, the number approximating 340 animals. Milk is produced for use in hospitals and institutions only. All these byres are regularly supervised and found to be well kept.

Food and Drugs (Adulteration) Act, 1928, *Section* 8—*Registration of Butter Factories and Wholesale Dealers in Margarine, etc.*—Sixteen butter factories, 133 wholesale dealers in margarine, and one margarine factory are on the register. Visits were paid to these premises in the course of the year, and no contravention was found. Samples taken were reported upon satisfactorily by the City Analyst. Details of the number on the register at the end of the year are as follows :—

Margarine Factories	1
Wholesale Dealers in Margarine	133
Factories of or Wholesale Dealers in Milk Blended Butter	—
Butter Factories	16

The Ice-Cream (Scotland) Regulations, 1948.—These Regulations became operative throughout Scotland during the year and supersede the control which was exercised in Glasgow under the Milk and Dairies (Scotland) Act, 1914. Requirements to heat treat ice-cream mixtures to temperatures of 150°F. for 30 minutes or 160°F. for 10 minutes and cooling within 90 minutes to not more than 45°F. along with other details have now to be observed. Satisfactory premises with suitable equipment must be provided. It is essential for all dealers in and manufacturers of ice-cream to apply to the Local Authority for registration. There are certain exceptions such as hotels, restaurants and boarding-houses where ice-cream is only supplied as part of a meal. Exception from registration, however, does not relieve these hotels, restaurants and boarding-houses from complying with the Regulations in every respect, a point which is not commonly understood. A disturbing aspect of the Regulations is the unsatisfactory measure of control over the owners of vehicles whose place of registration is the address where the vehicle is " ordinarily " kept. This address commonly is a public garage or lock-up. Where an applicant has registered ice-cream premises of his own no cause for objection arises as the utensils and equipment used in course of the business are cleansed and sterilized under good conditions. Itinerant street traders are in a different category altogether, having no registered premises of their own. These persons, therefore, have to obtain facilities for cleansing and sterilizing at the places where the supplies of ice-cream are obtained. A proper oversight of this type of dealer is as a result somewhat difficult. A request for a better arrangement has been made to the Department of Health for Scotland who have promised to give the matter their attention in an early amendment.

A considerable amount of time and attention has been devoted to the inspection of proposed premises, equipment and vehicles. Advice and information, much in demand, have been given by the inspectorate to prospective dealers. A great measure of interest has been shown by members of the ice-cream trade who appear to be anxious to observe the conditions of the Regulations. Unfortunately the supply of equipment is slow and licences to make alterations in existing premises are difficult to obtain. Registrations have been held up accordingly in many cases. A number of applications, however, have been approved and sanctioned by the Health Committee. Others are in course of being dealt with. It is anticipated that finally there will be something in the region of 700 dealers on the Ice-Cream Register.

During the year 3,902 inspections were made of premises as a result of which repairs were carried out in 27 instances and three contraventions were corrected.

Over the year 86 samples of ice-cream were obtained for examination by the City Bacteriologist and the City Analyst. The following table shows those examined for the number of bacteria, methylene blue, reduction, phosphatase and fat content respectively. No standards are fixed yet for testing the purity of ice-cream and these results meantime may be taken as a guide for future consideration when standards are being laid down.

SAMPLING OF ICE-CREAM, 1948.

Bacteria per Millimetre.

No. Examined	No. under 200,000 with Coliforms Absent	No. under 200,000 with Coliforms Present	No. over 200,000 with Coliforms Absent	No. over 200,000 with Coliforms Present
86	68	5	8	5

Methylene Blue Test.

No. Examined	No. not Decolorised in 4½ hours	No. Decolorised in less than 4½ hours
78	77	1

Phosphatase Test.

No. Examined	No. Passing Test	No. Failing in Test
81	38	43

Fat Content.

No. Examined	Average Fat Percentage	Highest	Lowest
81	5·09	12·76	0·07

Cleansing of Milk Bottles.—The cleansing and sterilising of bottles used to contain milk for human consumption is an important public health requirement. Creameries or large wholesale establishments are usually well equipped with modern bottle washing machinery, either of the soaker sprayer or the jet type. These, when properly operated, give no cause for complaint. Other methods adopted in the smaller dairies where the bottles are washed by hand or by rotary brushes are not so satisfactory. As improperly washed bottles cause high bacterial content in milk the necessity for efficient bottle washing and sterilising is apparent. In the course of the year 233 washed bottles were taken from dairies in the City and examined by the City Bacteriologist. The standard of examination adopted was a maximum of 600 organisms per pint bottle. Of the 233 bottles examined 184 were found satisfactory and 49 unsatisfactory. Intimation was given in each case when an unsatisfactory report was received from the Bacteriologist. The results found by the different methods employed are as follows :—

	Number	Satisfactory	Unsatisfactory	Percentage Satisfactory
Washed by Soaker Sprayer Type Machine	36	32	4	89
Washed by Jet Type Machine	146	122	24	84
Washed by Rotary Brushes	33	19	14	58
Washed by Hand Brushes	18	11	7	61

It will be seen from this table that washing by rotary brushes and by hand brushes is less satisfactory than the other methods.

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

Details of Samples, etc., in which Proceedings were instituted during 1948.

Number of complaints.	Nature of sample and alleged offence.	Number of convictions.	Amount of fines imposed.	Number dismissed or found "not guilty."	Number deserted simpliciter.
2	Milk—Deficient in milk fat ...	1	£5	—	1
2	Milk—Deficient in solids other than fat	—	—	—	2
7	Mince—Contained preservative during prescribed period ...	7	£20	—	—
2	Mince—Contained an excess of preservative	2	£8	—	—
5	Sausages—Contained an excess of preservative	5	£12	—	—
4	Sauces—Contained an excess of preservative	3	£15	1	—
1	Whisky—4·97 degrees below the statutory limit	1	£5	—	—
1	Obstructing an officer in the course of his duty	1	£5	—	—
24		20	£70	1	3

ABSTRACT OF PROCEEDINGS UNDER OTHER THAN FOOD AND DRUGS (ADULTERATION) ACT, 1928.

Meat Products and Canned Meat (*Control and Maximum Prices*) *Order*, 1948.

Number of Complaints.	Nature of Sample and alleged Offence.	Number of Convictions.	Amount of Fines imposed.	Number Dismissed of Found "Not Guilty."	Number Deserted *simpliciter*.
8	Sausages—Deficient in meat content	2	£20	—	6

SPECIAL SANITARY OPERATIONS.

	1942.	1943.	1944.	1945.	1946.	1947.	1948.
(*a*) FOOD AND DRUGS, ETC.—							
I.—*Dairies*—							
Registered during year	—	55	143	103	160	250	193
Removed from Register	—	79	227	110	182	269	205
On Register at 31st Dec.	1,582	1,558	1,474	1,467	1,445	1,425	1,413
No. of Inspections ...	17,586	17,529	15,829	15,719	15,957	16,071	15,789
Contraventions of Orders, Act, or Bye-laws ...	19	22	55	54	65	40	35
Prosecutions for same	1	11	6	4	5	—	—
Repairs or improvements effected ...	44	28	83	91	75	91	36

SPECIAL SANITARY OPERATIONS—*Continued.*

	1942.	1943.	1944.	1945.	1946.	1947.	1948.
II.—*Dealers in Ice-Cream*—							
Registered during year	—	2	—	94	52	42	New Regulations now operative
Removed from Register	—	2	1	118	41	36	
On Register at 31st Dec.	452	452	451	427	438	444	—
No. of Inspections ...	4,421	1,951	1,144	3,103	3,206	3,873	3,902
Contraventions of Acts, Orders or Bye-laws ...	1	—	—	5	11	4	3
Prosecutions for same	—	—	—	1	—	—	—
Repairs or improvements effected ...	1	—	—	18	14	16	27
III.—*Byres for Milch Cows*—							
No. of Dairy Byres as at 31st December ...	70	69	64	64	58	59	57
No. of cows licensed for	1,798	1,792	1,665	1,665	1,467	1,499	1,458
Average number kept ...	1,574	1,565	1,576	1,571	1,239	1,230	1,281
No. of Inspections ...	444	473	538	425	477	423	428
IV.—*Unwholesome Food*—							
No. of Inspections ...	11,564	12,053	10,468	10,026	9,905	10,328	10,493
No. of Lots dealt with ...	1,845	2,001	2,075	2,308	2,339	3,180	2,380
Amount of Food destroyed at Inspector's instance with Owner's consent	tons 114 cwts. 14 lbs. 41	tons 99 cwts. 6 lbs. —	tons 180 cwts. 17 lbs. —	tons 221 cwts. 6 lbs. —	tons 145 cwts. 2 lbs. —	tons 139 cwts. 16 lbs. 30	tons 91 cwts. 4 lbs. 71
V.—*Food and Drugs (Adulteration) Act*—							
Informal samples analysed	2,165	2,079	2,098	2,183	2,877	3,372	3,659
Statutory samples analysed	1,156	1,284	1,251	1,241	1,245	1,314	1,291
Statutory samples found non-genuine ...	61	41	36	45	35	32	34
Proceedings instituted	52	31	28	39	27	24	24
No. of convictions ...	40	31	25	33	22	17	20
Amount of fines imposed	£106 8s.	£110	£103	£124	£80	£63	£70
No. dismissed or found "Not Proven" ...	7	—	—	—	1	3	1
No. deserted simpliciter	5	—	2	6	2	4	3
Warranty Defence sustained	—	—	1	—	—	—	—
No. pending	—	—	—	—	—	—	—
No. withdrawn... ...	—	—	—	—	—	—	—
No. dismissed (first offenders)	—	—	—	—	2	—	—

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

Table showing Nature and Number of Total Samples Procured and Examined during 1948.

Nature of Sample.	Informal. No. Taken.	Informal. No. Non-genuine.	Statutory. No. Taken.	Statutory. No. Non-genuine.
Aerated and Mineral Waters ...	29	—	—	—
Almonds, Ground (substitute) ...	1	1	1	—
Alum	8	—	—	—
Arrowroot	1	—	—	—
Aspirin	34	1	—	—
Aspro	1	—	—	—
Baking Powder	21	2	4	—
Barley and Barley Flakes	3	—	5	—
Bay Leaves	1	—	—	—
Beef Extracts	6	—	—	—
Beer	7	—	—	—
Bicarbonate of Soda	23	—	—	—
Bismuth Carbonate	2	—	—	—
Bismuth Loz. (Comp.)	6	—	—	—
Black Pudding	5	—	1	—
Boracic Powder	1	—	—	—
Borax	18	—	2	—
Bourn-Vita	1	—	—	—
Brose Meal	—	—	3	—
Butter	6	—	20	—
Cake Mixture	2	—	—	—
Calcium Lactate	6	—	—	—
Carraway Seeds	1	—	—	—
Cascara Sagrada Tablets	2	—	—	—
Cleery Salt	2	—	—	—
Cheese	—	—	5	—
Chemical Food	2	—	—	—
Cherries, Glace	—	—	2	—
Chocolate Laxative	3	—	—	—
Cinnamon	14	—	1	—
Citrus Peel	1	—	—	—
Cloves	4	—	—	—
Cocoa	10	—	13	—
Coffee	21	—	9	—
Coffee Essence	1	—	—	—
Coffee Essence with Chicory ...	20	1	—	—
Cooking Fat	6	—	23	—
Cornflour	1	—	—	—
Cream of Magnesia	2	1	—	—
Cream of Tartar	29	—	2	—
Currants	—	—	10	—
Curry Powder	6	2	—	—
Custard Powder	12	2	1	—
Cyder	1	—	—	—
Dates	—	—	4	—
Date Paste	1	—	—	—
Dessert Mould	2	—	1	—
Farinoca	—	—	1	—
Figs	1	—	10	—
Fish Cakes	5	1	—	—
Fish Dressing	7	—	—	—
Fish Paste	40	—	1	—
Fish and Vegetable Puree	1	—	—	—

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928—*Contd.*

Table showing Nature and Number of Total Samples Procured and Examined during 1948—*Contd.*

Nature of Sample.	Informal.		Statutory.	
	No. Taken.	No. Non-genuine.	No. Taken.	No. Non-genuine.
Flavourings	5	—	—	—
Flour, S.R., and Ordinary	13	—	5	—
Flowers of Sulphur	6	1	2	—
Friar's Balsam	4	—	—	—
Fruit Juice	1	—	—	—
Fruit Pudding	1	—	—	—
Fruit Puree	2	—	—	—
Gelatine	9	—	3	—
Ginger	17	—	8	—
Glycerine	6	—	—	—
Glycerine of Thymol	1	—	—	—
Gravy Salts and Powders	17	—	—	—
Gregory's Powder	—	—	1	—
Herbs, Mixed	2	—	—	—
Ice Cream	80	—	—	—
Iodine Paint	1	—	—	—
Jams and Jellies	9	—	—	—
Jelly Crystals	3	—	—	—
Lard	1	1	—	—
Lemon Curd	1	—	—	—
Lentils	1	—	—	—
Liquid Paraffin	4	—	—	—
Liquorice, Powdered	5	2	—	—
Liquorice Mints	1	—	—	—
Liquorice and Menthol	1	—	—	—
Mace, Ground	1	—	—	—
Macaroni	—	—	7	—
Magnesia, Fluid	1	—	—	—
Margarine	8	—	22	—
Marmite	2	—	—	—
Meat, Cooked	1	—	—	—
Meat Loaf	8	—	—	—
Meat Paste	29	—	—	—
Meat, Potted	13	—	1	—
Meat Roll	1	—	—	—
Meat and Vegetable Puree	1	—	—	—
Milk of Magnesia	1	—	—	—
Mince	35	6	39	10
Mincemeat	6	—	—	—
Mint, Dried	1	—	—	—
Mustard and Mustard Comp.	9	—	2	—
Nutmegs	2	—	1	—
Oat Flour	—	—	1	—
Oil, Camphorated	18	—	1	—
Oil, Castor	21	—	—	—
Oil, Cod Liver	2	—	—	—
Oil, Olive	16	1	—	—
Ointments, Medicinal	32	1	—	—
Onions, Shredded	1	—	—	—
Oxo Cubes	4	—	—	—
Pea Flour	1	—	—	—
Peaches, Dried	—	—	4	—

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928—*Contd.*

Table showing Nature and Number of Total Samples Procured and Examined during 1948—*Contd.*

Nature of Sample.	Informal.		Statutory.	
	No. Taken.	No. Non-genuine.	No. Taken.	No. Non-genuine.
Peasemeal	1	—	—	—
Peppers	46	—	10	—
Peroxide of Hydrogen	2	—	—	—
Petroleum Jelly	1	—	—	—
Plums with Semolina	1	—	—	—
Potass. Permanganate	8	—	—	—
Potato, Mashed	—	—	1	—
Potato Crisps	2	—	—	—
Powders, Medicinal	1	—	—	—
Prunes	2	—	6	—
Pudding Mixture	6	—	1	—
Raisins	2	—	6	—
Rice Flour	2	—	—	—
Rice Substitute	—	—	2	—
Rum	—	—	1	—
Saccharin	13	2	—	—
Sage	1	—	—	—
Sage and Onion Stuffing	3	—	1	—
Sago	2	—	7	—
Salts, Medicinal	41	1	2	—
Salt, Table	15	—	—	—
Sandwich Spread	3	—	—	—
Sauces	52	5	4	3
Sausage Meat	1	—	1	—
Sausages	126	9	78	13
Semolina	6	1	21	—
Soups, Canned	16	1	—	—
Soya Flour	2	—	5	—
Spaghetti	1	—	1	—
Spice	5	—	—	—
Sponge Mixture	1	—	—	—
Suet	1	—	11	—
Sugar	—	—	2	—
Sultanas...	1	—	6	—
Sweet Milk	2,448	29	896	7
Synthetic Colouring	3	—	—	—
Syrup of Figs	7	—	—	—
Tapioca	3	1	2	—
Teatime Tablets	1	—	—	—
Thyme	1	—	—	—
Tinct. of Iodine	8	1	—	—
Tomato Paste	1	—	—	—
Vaseline	1	—	—	—
Veal, Jellied	6	—	2	—
Veal and Pork	2	—	—	—
Vegetables, Dried	5	1	—	—
Vermicelli	—	—	1	—
Vinegar	14	1	2	—
Vitamin C Tablets	1	—	—	—
Whisky	—	—	6	1
Wines, Non-alcoholic	5	—	—	—
Wine Essences	7	—	—	—
	3,659	75	1,291	34

SECTION IX.

AIR PURIFICATION AND SMOKE ABATEMENT.

Post-war economic conditions continue to exercise a degree of control and consequent restriction upon the activities of the smoke abatement section of the Public Health Department. There are still many difficulties relating to fuel supplies and also to matters of repairs and replacements of industrial plant. These conditions influence to a great extent the demands which can reasonably be made upon firms when they are found contributing unduly to the pollution of the atmosphere of the city. The quality of fuel which has been available has often been of a very low grade and the replacement or modernising of defective plant still requires a considerable time. However, the best is being made of these unavoidable conditions to keep the standard of smoke control at as high a level as possible and, at the same time, maintain the usual friendly co-operation with industrial firms. A general improvement in the atmospheric conditions observed over the city during the year falls to be reported.

Record of Work during 1948—

Observations of chimneys	21,900
Inspection of steam boiler and other furnaces ...	385
Intimations of excess smoke given	281
Warning notices given	137

In addition to the foregoing an increasing number of complaints were investigated. This aspect of the work is referred to in some detail below as is also work in the shipping area.

A yearly analysis of the figures contributing to the above totals shows that the maximum number of observations are made during spring and early summer (longer and clearer daylight) while the maximum number of inspections and intimations, etc., are made during winter (heavier load conditions). During late summer and autumn experience would indicate that plant executives and operatives are still on the " qui vive " as the result of former notices and verbal reminders.

Investigation of Complaints.—The investigation of complaints of smoke, grit, soot and fumes resulting from industrial combustion process is an important aspect of the work and is one which calls for much patience being exercised in the efforts to ameliorate the conditions complained of. The work also entails much time being spent on it as such complaints are of almost daily occurrence. They are received by letter, telephone and personal call. Where possible a personal call is made on the complainer or the main complainer, a lengthy observation is made, the firm visited, and again the complainer advised of action taken or to be taken. Failing personal contact much correspondence may be and often is involved. This is especially so in the case of large plants or extensive nuisance where a number of interests may be involved. Indeed some individual plants and operations where trouble is of regular recurrence have special official files allocated to them.

Improvements to Plant during 1948.—In the report for last year (1947) a resumption was made of listing plant improvements which came under the notice of the smoke inspectors and which had and would have a direct bearing on smoke abatement. It is certain that many more improvements other than those recorded below have been carried out, but they had not so far been noted because in many of the small plants the staff had no occasion to call. Pre-war each year there was recorded a substantial list of such improvements under the respective headings, but post-war the supply of such equipment is longer term and it cannot be expected that the list will be so complete as formerly for some time yet.

Number of new steam boilers installed to give increased power	14
Number of mechanical stokers fitted to steam and heating boiler furnaces	6
Number of new chimneys erected or existing chimneys heightened	6
Number of boiler or process furnaces converted to gas or oil fuel	2
Number of new mechanical grit and dust arrestors installed ...	7
Number of improvements not coming under above headings ...	14

The above figures deal only with new plant and do not refer to the repair work effected on existing plant involving boiler and furnace settings, flues, chimneys and dampers, etc. Some very extensive plant alterations and additions are in process and will be listed in a future report.

Prosecutions.—During 1948 seven prosecutions were taken against offenders for the issue of excessive smoke from the chimneys connected with the plant used by them. The cases being of a technical nature are taken in the Central Police Court and are heard by the Stipendiary Magistrate. Such prosecutions taken by the Department are instituted under the terms of the Glasgow Police (Further Powers) Act, 1892, Section 31. Legal action is only taken after the offender has been previously warned, in most instances on several occasions. Advice is always offered by the smoke inspectors and it is only when such advice is being persistently ignored that recourse is made to such action.

This Department much prefers an amicable abatement of a nuisance to a successful prosecution. All of the seven prosecutions taken were in respect of first offences. Five of the respective respondents were fined £2, one was fined £1 and one was admonished. The admonition was probably in view of the case being the first post-war complaint to come before the court.

Grit and Dust Emission.—A proportion of the complaints investigated during the year were occasioned by the emission of grit and dust and mostly the result of large scale operations. This type of nuisance has been steadily on the increase for a long period—again especially from larger steam plants. In the pre-war years it was due to the increasing use of forced draught systems and smaller gradings of fuel. During the war years and since, in addition to the even greater use of the smaller grades of fuel, generally of inferior quality as regards heating value and ash content, there is the increased load demands to be contended with—an unfortunate combination. This, as indicated, is very evident when large plants are involved which are sited near built up dwelling areas. Several large electrical power stations have been involved. One such plant in the East End has been a source of nuisance for many years and post-war the position over a wide area has been acute. Complaints have been received from all quarters, both individual and communal. A very large sum of money has already been spent in the provision of new and improved types of mechanical grit arrestors, forced draught systems, etc. Much more it is thought will have to be spent before conditions will be satisfactory. Similarly another station on the extreme west of the city has been causing renewed trouble. This plant was at one time adequately equipped with grit arrestors, after complaint by this Department, but the fuel change has now made the position more difficult and complaints are being renewed. In addition to the larger plants there have been other complaints involving smaller boiler and process units, *e.g.*, metal refining and foundry cupolas. The introduction of baffles in the flues and reduction of draught used, and wherever possible the use of a larger grade fuel, has very considerably reduced the grit and dust emissions. Several users have installed mechanical separators.

Fume Nuisance.—Nuisances from fumes as the result of combustion processes were frequent during the year. The majority were of a simple character and were easily resolved, while a number involving large scale operations were of a more complex nature and were not so easy of solution. Characteristic fume nuisances from certain industries are difficult to deal with and eliminating them entirely either involves interference with the process or heavy capital expenditure. In several cases assistance was given by the Chief Inspector under the Alkali Act, etc., from the Department of Health, Edinburgh. These involved alleged nuisances where the emanations were of a definite and complex chemical nature. The main causes of fume nuisances were the burning of old oil drums, destruction of rubber refuse and old tyres, recovery of copper from insulated cables, burning old oil at garages, chip and sawdust burning in fish curing lofts, non-ferrous foundry cupolas and pots, coke oven gas escaping to atmosphere, heat treatment of chemical compounds, and destructive burning of scrap from processed resinous material, etc.

Sectional Type Heating Boilers.—This class of heating unit continues to be a frequent source of smoke nuisance. The majority of such plants are sited in the central areas of the city and in too many instances the chimneys connected with them are not of a height sufficient to carry the gases clear of surrounding buildings. This type of boiler is designed to operate with non-bituminous varieties of fuel such as anthracite, semi-anthracite or navigation and cokes. Owing to the stringency in the supply of these fuels greater use has had to be made of ordinary bituminous coals. Stoking of these boilers is usually at long intervals and therefore over stoking is a usual cause of heavy smoke emissions. Early morning firing up and later afternoon banking of fires are prolific periods of complaint.

Shipping in the Harbour.—The shipping areas within the city boundaries being included in the respective observation districts in which they are situated were under usual routine and special observation during the year. Having regard to the considerable volume of shipping traffic—from ocean-going vessels to smaller coastwise and river craft—

the harbour and docks are now surprisingly free from serious nuisance. It has to be noted that the marine engineering staffs are highly skilled and any undue emission of smoke is immediately observed and steps taken accordingly. The smoke inspectorate, being themselves marine engineers, are well qualified to advise the engine room staffs when necessary. During the year, apart from routine observation, a number of urgent complaints were received by 'phone intimating heavy smoke emissions from berthed vessels. These were immediately investigated and in every case maladjustment of the oil fuel burners was found to be the cause of trouble.

Mobile Pitch Melters.—Most of the pitch and asphalt now used by paviors and road contractors is melted in central premises in large stationary appliances and is then moved rapidly to the site of the work. There is, however, quite a number of the smaller portable type in operation doing small repair work in streets and roadways. Normally these use coke as fuel, but on occasions coal is used and they can then become veritable smoke producers. In addition to being difficult to fire with minimum smoke emission, the attendants are not usually skilled and as a result there is much irresponsible stoking in consequence. A number of such cases were dealt with during the year.

Soot and Atmospheric Precipitation Gauges.—The monthly soot and dust recordings from the five city and two country gauges were carried on during the year. These gauges of the standard precipitation type are sited North, South, East, West and Central within the city boundaries, while the country gauges are placed to the north of the Mugdock Reservoir and at Brenachoile on the easterly side of Loch Katrine. The sites in the respective areas are chosen so as to be as clear of any mechanical interference as possible and also free of local contamination, such as rain washings from trees, shrubs, buildings and paths. The following summarises the information for the year and the previous year.

DEPOSIT OF EACH ELEMENT OF ATMOSPHERIC POLLUTION FOR 1947-1948.

	Tons per square mile.	
	1948.	1947.
Insoluble matter—		
Tar	2·95	3·55
Carbonaceous other than tar	44·32	51·35
Ash	105·52	111·99
Total insoluble matter	152·59	167·90
Total soluble matter	87·65	82·96
Total solids	240·24	250·84
Rainfall in millimetres	1,154	898·74

Also appended at the end of the report for this section is a table giving details of the average monthly deposit of each element of atmospheric pollution for the year and a comparison with the previous six years.

During 1948 the average weight in tons per square mile of solid deposit was 0·209 per millimetre of rainfall, while the corresponding figure for 1947 was 0·279. This showed a decrease of 0·070 for the year. The total precipitation for 1948 amounted to 240·24 tons per square mile while the figure for 1947 was 250·84, a decrease of 10·60 tons. The average for the six yearly period 1942-1947 was 250·65, indicating a reduction of 0·19 for the current year in comparison with the six year average. The average monthly rainfall over the winter period (October-March) was 95·66 millimetres and the average deposit of total solids for the same period was 23·56 tons per square mile. The corresponding figures for the summer period (April-September) was 96·66 millimetres rainfall and 16·49 tons per square mile. The average total annual rainfall for 1948 as indicated by the gauges was 1,154 millimetres, the figure for 1947 being 898·74. There has thus been indicated a heavier rainfall but a decrease in total solid precipitation. This inverse result does occasionally occur and is explained by the fact always pointed out in these reports that the incidence of the rainfall has a direct bearing on the result obtained. " Showery conditions " have a greater cleansing effect on the atmosphere than long periods of downpour.

COURSE IN BOILER HOUSE PRACTICE, SMOKE ABATEMENT, AND FUEL ECONOMY.

The 33rd Annual Winter Session of the above Course was carried on during the latter part of the year. The Scottish Fuel Efficiency Committee of the Ministry of Fuel and Power again collaborated in the work of the class when the session's arrangements were being made. The Committee circularised most of the local industrial firms using steam and furnace plant, while the Smoke Abatement Society and this Department advised all Corporation and Local Authority departments in the area of the details and dates of the Course. A combined ordinary and advanced class was commenced on Tuesday evening, 5th October, 1948, the venue again being the Burgh Court Hall, New Municipal Buildings, the use of which was granted by the Corporation. The class met each Tuesday evening thereafter between 7.45 and 9.15 p.m. The fee charged was the nominal one of five shillings. Full use was made of the comprehensive series of wall charts, some sixty in number, possessed by the Public Health Department and also the working models of mechanical stokers. As was the experience during the previous two years, the combined class had to be split up and lectures were given on the Wednesday evenings also. This was necessary after the third lecture of the Course. The ordinary class met on the Tuesdays and the advanced on the Wednesdays. The total enrolment was 146. Of this number 77 were ordinary or first year students, and 69 advanced students, respectively. The Course finished on 5th January, 1949. The average attendance over the session was 77·2 per cent., ordinary, and 77·2 per cent., advanced—a combined average of the same amount. A total of 26 lectures was given and in addition two further advanced lectures of two hours each were given during April to intending candidates for the City and Guilds of London Institute Examination in Boiler House Practice. Twenty-seven men made application to take this examination this year. The written class examinations were held during January, 1949. Fifty-eight men came forward, thirty-two taking the ordinary and twenty-six the advanced paper, respectively. Fifty per cent., or over is the pass mark for a merit certificate. Only bona fide stokers, boiler attendants or men of similar status attaining 70 per cent. or over are eligible to compete for the three book prizes allocated to each class. Twenty-six men of the advanced and twenty-six of the ordinary gained merit certificates. These, with the prizes, were distributed at the Annual Social Meeting held during May. This was attended by members of the Corporation, Smoke Abatement Society, and the Fuel Efficiency Committee of the Ministry of Fuel and Power.

AVERAGE DEPOSIT OF EACH ELEMENT OF ATMOSPHERIC POLLUTION FOR EACH MONTH OF 1948.

ENGLISH TONS PER SQUARE MILE.

			INSOLUBLE MATTER						Included in Soluble		TOTAL SOLIDS					
	Month	Rainfall in millimetres	Tar	Carbonaceous less Tar	Ash	Total Insoluble Matter	Total Soluble Matter	Total Solids, 1948.	Sulphate as SO_4	Chlorine as Cl.	1947.	1946.	1945.	1944.	1943.	1942.
Mean of 5 Stations ...	January ...	140	·20	5·85	10·73	16·78	11·19	27·98	2·92	1·87	20·15	25·81	22·35	30·41	26·02	34·66
,, ,, ...	February	100	·18	3·51	7·89	11·58	10·67	22·24	2·91	2·54	26·48	18·55	34·28	20·67	25·77	24·96
,, ,, ...	March ...	58	·24	4·76	14·90	19·89	7·09	26·99	2·10	1·01	22·58	22·89	23·16	17·86	20·87	26·83
,, ,, ...	April ...	78	·24	3·57	9·97	13·78	7·21	20·99	2·09	1·42	28·47	14·88	18·88	23·09	28·33	18·43
,, ,, ...	May ...	26	·19	4·32	6·86	11·36	4·63	15·99	1·54	·32	24·05	12·30	23·28	20·68	19·18	16·36
,, ,, ...	June ...	119	·32	3·62	8·18	11·92	5·67	17·58	2·36	·58	18·63	17·72	19·94	21·83	18·70	18·67
,, ,, ...	July ...	61	·14	2·03	5·73	7·89	2·89	10·78	1·20	·35	18·85	14·51	14·72	18·54	20·86	11·81
,, ,, ...	August	139	·30	3·26	5·81	9·38	7·76	17·14	2·36	·82	No. Rainfall	15·67	14·59	22·07	21·09	23·91
,, ,, ...	September	157	·27	2·28	7·48	10·03	6·44	16·48	2·32	·74	28·47	22·70	18·29	19·62	11·37	15·45
,, ,, ...	October ...	83	·37	3·45	7·48	11·31	6·80	18·11	2·32	1·01	15·04	15·84	21·33	24·05	19·92	24·24
,, ,, ...	November	82	·22	3·66	9·59	13·48	8·12	21·59	2·87	1·42	23·95	20·40	15·85	22·09	18·13	20·12
,, ,, ...	December	111	·28	4·01	10·90	15·19	9·18	24·37	3·02	2·09	24·17	27·82	22·57	24·16	19·88	24·12
Yearly Deposit in tons per square mile		1,154	2·95	44·32	105·52	152·59	87·65	240·24	28·01	14·17	250·84	229·09	249·24	265·07	250·12	259·56
Monthly mean of all Gauges		96	·25	3·69	8·79	12·72	7·30	20·02	2·33	1·18	20·92	19·09	20·77	22·09	20·84	21·63

SECTION X.

GENERAL SANITARY OPERATIONS.

Central Division.

The pattern of events in 1948 did not alter greatly from that of the previous year. The record was one of steady, routine work unbroken by anything of a spectacular nature. Disappointingly, the feeble flame of slum clearance, relit in 1947, flickered and died out. The work of rodent control continued at the level of intensity reached during the previous year and valuable results, especially in restaurant premises, were obtained ; a great deal of large-scale ratproofing was also carried through.

Some comment was made in last year's report on the problem presented by old, friendless people—generally women—living alone and physically incapable of looking after themselves or their homes. A number of such cases again came to light. With an ageing population the number will tend to increase. Section 47 of the National Assistance Act, 1948, gives power to the Local Authority, on certification by the Medical Officer of Health, to have such persons removed for a period not exceeding three months to a suitable institution. These powers are only intended for use in very bad cases and will require to be used with the greatest discretion, involving as they do the liberty of the subject. The whole question is further complicated by the shortage of suitable accommodation.

Fuller comment on these and other aspects of the year's work is given under the appropriate headings and detailed figures are to be found in Table XVII of the Appendix.

Nuisances.—Of the nuisances discovered and removed during the year, 73 per cent. came under the three headings of disrepair and dampness, choked or defective sanitary fittings and choked or defective drains and conductors, all in connection with dwelling-house property. This figure is an indication of the continued deterioration of house property. The housing position, unfortunately, still makes it imperative to demand repairs to houses which by every standard should be swept away. A slight improvement was discernable in the time taken to deal with repair work, probably due to a betterment in the supply of materials. The volume of nuisances dealt with was well up to the level of preceding years but none was of a nature calling for special comment. Proceedings were taken against two owners for failure to abate nuisances. In one case the Corporation were decreed to do the work. This property was subsequently abandoned. In the second, the nuisance was removed before the case was called and the Town Clerk abandoned the proceedings on payment of expenses.

Rat Extermination.—The conclusion of the scheme conducted jointly with the Department of Agriculture in the central area of the city and reported on last year was responsible for a diminution of the inspections carried out under this heading. This involved no relaxation of effort in the campaign against rats, but merely a shifting of ground. As a result of the experience gained during the joint scheme, it was decided to concentrate on the type of premises which gave the greatest result in rats killed. A survey was undertaken of all restaurants, tearooms and similar premises in the Division. Where necessary, trapping was carried out and many large kills obtained. A letter was addressed to all restaurant, etc., proprietors calling attention to their special responsibilities to the public as handlers of foodstuffs and to the proved vulnerability of many of their premises to rat infestation. It may now be fairly claimed that the activities of the Department have made many commercial concerns much more rat-conscious than formerly and that infestations, previously ignored as in the natural order of things, are now reported and assistance sought. A great measure of success attended the efforts to have premises ratproofed in spite of high costs and shortages of some essential materials. Details of the year's activities are as follows :—

Premises treated by Department of Agriculture	366	
Premises treated by other agencies	10	
*Major ratproofing carried out	17	
Other premises ratproofed	282	
Ratproofing impracticable or unnecessary	77	
Total rats killed—		
By Department of Agriculture	5,197	5,359
By other agencies	162	

*"Major ratproofing" implies very considerable structural alterations and repairs. Among premises so treated were 10 restaurants, 3 tenements, 2 shops, 1 warehouse and 1 factory.

A new measure, The Prevention of Damage by Pests Bill, is at present before Parliament and if, as seems likely, it becomes law this year it will give wider and stronger powers for dealing with rat infestations. One weakness in the present Act is that no power is given to serve notices on owners except where premises are unoccupied ; the new Bill provides this power.

Factories Act, 1937.—Routine inspection of factories and bakehouses continued normally during the year and nothing of an outstanding nature occurred. One basement bakehouse of which the Certificate of Suitability was withdrawn in 1939 but was continued during the war years and since, owing to the lack of suitable alternative premises, was still in existence at the end of the year. The Committee on Health continued the Certificate during the year on special application by the occupier. Alternative premises have now been secured in an industrial estate and the probability is that this bakehouse will disappear from the register during the coming year. An investigation was made into the hygienic conditions prevailing in restaurants, cafes, tearooms and similar establishments in the Division. A limited number of the various types was investigated in order to obtain a cross-section of the picture. The questionnaire drawn up covered such points as staff hygiene, provision and laundering of overalls, whether the staff were instructed to notify infectious diseases in their homes to the management, the methods of washing and drying of crockery and cutlery, the storage and disposal of waste food, etc., etc. The type of restaurant which came best out of the investigation was that run in conjunction with large retail warehouses. The standard in these establishments was generally very satisfactory. One surprising feature was the number of large, good class establishments which still rely on hand-drying of dishes and cutlery. Very few were found to employ self-drying and polishing equipment. Another outcome of the survey was that only in rare instances was it a direct instruction to the staffs to report the fact of infectious diseases existing in their homes to the management. As regards the withdrawal from service of chipped and cracked crockery, this was found to be largely governed by the supply position. A few high-class establishments withdraw such immediately, others withdraw cracked or chipped cups but continue the use of saucers and plates. The general position is that defective crockery is withdrawn as and when replacements become available.

Mention might be made here of the need for specific legislation for the control of such premises as restaurants, hotel kitchens, cafes, etc., where food is prepared and served for human consumption. Restaurant and hotel kitchens are not regarded by H.M. Inspector of Factories as coming within the scope of the Factories Act, 1937, and it is extremely doubtful if the Public Health Acts could be invoked in such cases.

Shops, Offices.—The great increase in the number of visits under the Shops Act, 1934, viz. : 1,536 as against 90 in the previous year, is accounted for by the fact that a systematic survey of all shops in the Division was set afoot in the latter part of the year. The object is to bring the position up-to-date as great changes in the number and occupancy of shops have occurred since the last survey in 1935. The survey will be completed during 1949 and the results embodied in the report for that year. During the year under review, nothing calling for special comment transpired and any conditions in shops calling for remedy were dealt with without trouble.

Common Lodging-houses.—No trouble was experienced in the administration of these establishments. Any irregularities were of a minor nature and remedied on request. One seamen's boarding-house accommodating 89 persons closed down during the year. This was one of those established during the war to meet the special demand of those times. This leaves on the register 10 common lodging-houses (including three boarding-houses for seamen) with accommodation for 1,903 males and 276 females.

It is opportune now to raise the question, referred to in a previous report, of the charges in common lodging-houses. Under Section 89 of the Public Health (Scotland) Act, 1897, the charge for a common lodging-house as defined must not exceed sixpence per night. By Section 46 of the Glasgow Confirmation Act, 1923, the permitted maximum charge was increased to one shilling. Most common lodging-houses now charge greatly in excess of this sum and so remove themselves from the definition. In the event of court proceedings becoming necessary at any time in respect of such premises, a very awkward situation would present itself. The solution would appear to lie in a change in the definition from a " sum charged " to a " type of accommodation " basis.

Houses-let-in-lodgings.—The number of such is now 86 as against 164 in the previous year. The difference is due to a purging of the old register.

Drainage.—The bulk of the drainage work arose from alterations and extensions of existing property. There was very little new house construction in the Division. The new arrangement inaugurated in 1947 by which tradesmen uplift and operate the drain-testing machines is now working smoothly after some initial teething troubles.

Offensive Trades.—One offensive trade—a soap boiler—was removed from the register, the premises now being used for the manufacture of sheep dip and disinfectants.

Cleansing of Common Closes, Stairs, etc.—The amount of work under this heading was much in line with former years. It was found necessary to prosecute offenders against the bye-laws on four occasions ; fines were imposed in three cases and the diet deserted in the remaining one.

Limewashing of close and staircase walls.—The work accomplished in this connection was well up to standard. Notices to owners to paint or limewash totalled 1,206. The number of properties white-washed and/or painted as a result was 1,265, being 316 more than in the previous year and 756 more than in 1946. It would appear that we are getting back to pre-war standards in this part of our work at least.

Difficulty has always been and continues to be found in securing the painting and limewashing of common entries and staircases giving access to commercial and industrial premises of which there are many examples in the city. There is no legislation which really fits such cases. The provisions of Section 252 of the Glasgow Police Act, 1866, as replaced by Section 36 of the 1934 Confirmation Act apply only to tenements, which are defined as buildings occupied principally as dwelling-houses. A way out might be found by widening this definition to include all buildings separately occupied.

Piggeries.—One piggery with accommodation for 80 pigs was converted into a stable, leaving 5 on the register. All were regularly inspected and no trouble experienced.

Housing.—As indicated in the introductory paragraphs, it was not found possible to put forward any houses for closure or demolition during the year. As always, alternative accommodation is the barrier ; the number of tenants requiring rehousing from properties declared dangerous by the Dean of Guild absorbed a large part of the available accommodation. In all, nine properties were so dealt with during the year involving 113 houses comprising 42 of one apartment, 61 of two apartments and 10 of three apartments. Of the nine properties, six have been demolished and three await rehousing of the tenants before being similarly dealt with. One of the latter tenements was occupied by squatters after the departure of the tenants and ejectment proceedings by the Procurator Fiscal are awaited.

Rent Restriction Acts.—There was a very sharp fall in the number of applications for certificates of disrepair under these Acts, 17 as against 119 in the previous year. This may be accounted for by the high percentage of refusals of such applications referred to in last year's report and to the fact that the organisation which sponsored many of these applications has become aware of the real purpose of the Acts. Of the 17 applications lodged this year, 16 were refused and 1 granted. Some of the refusals were, of course, due to the necessary repairs having been carried out before the application reached the Committee. Four applications for " reports " were made by owners and all were granted.

Squatters.—This problem was greatly reduced during the year by the removal of squatters from five sets of premises which they had occupied. Many were accommodated in former military camps now taken over by the Department of Health. Their going was a relief to those of the staff responsible for their supervision as in most cases the premises they had taken over were quite unsuitable and their standard of hygiene made constant visitation necessary. From the five premises 65 families totalling 293 persons were evacuated. The only premises now occupied by squatters in any numbers are the former Lock Hospital in Rottenrow and the former Civil Defence premises in Kelvingrove Park. The occupants of the former are under notice to quit and these premises will probably be evacuated in the coming year.

Verminous Children.—The inspection of school children continued on normal lines and at about the same volume as in the previous year. Again one feels bound to comment on the absence of powers for dealing with verminous adults to which reference was made under this heading in last year's report.

Rehousing Schemes.—In most of the rehousing schemes there is a small " hard core " of tenants who have resisted all efforts on the part of the nurse-inspectresses to bring them up to the standard of the majority. The time seems ripe to consider whether these people should be permitted to remain in possession of the facilities provided and which they have abused for so long. The transference of such families to some of the abandoned old-type tenements taken over by the Corporation might be considered.

The supervision of the schemes in the Division by the nurse-inspectresses was carried on systematically throughout the year and full details are to be found in Table XVII of the Appendix.

Sanitary Conveniences.—Demolitions reduced the number of water closets used in common by 21, and the number of such and other conveniences existing at the end of the year is as follows :—

W.C.'s used in common		3,186
Serving 2 tenants	1,031	
Serving 3 tenants	1,272	
Serving 4 tenants	651	
Serving 5+ tenants	232	
Dry closets and privy middens		18
Ashpits		45
Houses without internal water supply		44
Houses with baths		33,481

NORTHERN DIVISION.

A total of 259,247 visits was made by the staff in the course of their various duties during 1948. The principal items dealt with are detailed under their appropriate headings.

Nuisances.—As in former years, choked drains and sanitary fittings make up the bulk of nuisances requiring attention, but these are being exceeded by general disrepair in property—particularly that arising from roof defects and deteriorating plaster and woodwork. Repairs, involving roofs and other structural defects, are costly and there is considerable delay before these are given attention, the owners being reluctant to expend money which involves capital outlay.

During the year under review, 185,211 visits were made for the detection of nuisances ; 15,959 were brought to the notice of those responsible, and 17,393 were abated. It was necessary to serve Statutory Notices on twenty occasions.

Complaints from householders in the Ruchill and North Kelvin wards of smells emanating from factory premises were investigated. The investigation revealed that the smells arose from vapour given off during cooling and after sterification of certain basic materials necessary in the production of paints and varnishes. The vapours, which were being liberated into the atmosphere, were very pungent in character and affected a fairly wide area—depending on the direction of the wind.

On representation being made to the management of the firm concerned, steps were taken to find a method for preventing the nuisance. It was decided to trap the vapours in an enclosed chamber and pass them through a duct to a scrubbing plant, using fuel oil as the scrubbing medium which would afterwards be used for firing the firm's boilers. Delay in the supply of the necessary mechanical appliances did not permit the scheme to be put into operation before the end of the year. In the meantime, reduced production of the offending material has somewhat diminished the cause of the complaint.

Recurrent flooding in the low-lying area of ground to the south of Smithycroft Road and affecting the basement premises of a tenement of dwelling-houses, gardens of private houses and a private bowling green, occasioned some concern amongst the occupiers—particularly the players on the bowling green. The flooding, resulting from the surcharging of the public sewer in Smithycroft Road, carried solid faecal matter on to the surface of the affected area.

When the conditions were brought to the notice of the City Engineer, there was submitted an application to the Department of Health for Scotland for sanction to expend the necessary capital to complete a sewer which had been stopped at the junction of Smithycroft Road and Cumbernauld Road shortly after the oubtreak of the war.

If the sewer is completed, there should be no further flooding in the area.

Flooding in another part of the Division, attendant with tragic consequences, brought home to those concerned the dangers arising from disused basements not being properly secured. In this particular instance, a choked drainage system caused flooding in the basement of a tenement of dwelling-houses to a depth of four feet. Access to the basement was by an unguarded stair leading from the court. A child, unobserved, went down the stair to retrieve a ball and was drowned. The stairway leading to the basement was permanently sealed off by paving over the opening with concrete slabs.

Judgement on two cases enrolled in the Sheriff Court at the end of 1947 was given in favour of the Department. Both concerned the failure of the owners of tenement property to abate dampness in dwelling-houses arising from defects in the property roofs.

The first case involved the four-storey tenement property at 39 Balnain Street. When the respondent failed to appear before the Sheriff in answer to the charge, an Order was granted in favour of the Corporation to proceed with the work of abating the nuisance at an estimated cost of £438.

The work was carried out by the Maintenance Section of the Housing Department.

The second case involved the four three-storey tenement properties 1, 5, 7 and 9 Lyall Street. The respondents defended the charge and were represented in court by King's Councillor.

The main argument for the defence was that the Corporation had erroneously taken action under Section 20 of the Public Health (Scotland) Act, 1897, when in fact they should have operated the Housing (Scotland) Act, 1930, Section 16, closing the houses in the properties as being unfit dwellings for human habitation. This argument was repelled by the Pursuers. After protracted consideration, the Sheriff decreed that a nuisance existed and issued an Order on the respondents to abate the nuisance by stripping and reslating the roofs of the properties concerned at an estimated cost of £830—the respondents being given five months in which to complete the work. This was in progress at the end of the year.

Over ten months elapsed from the time the case was first raised in court and the judgement given. Meanwhile, the tenants in the properties affected had great difficulty in maintaining their houses in a livable condition. One or two left their homes to stay with relatives until conditions improved.

With a view to minimising the fly nuisance, all stables in the Division were visited in the early spring and the occupiers asked to have dung pits emptied of manure. Periodical visits were maintained throughout the spring and summer months to ensure that no manure was permitted to accumulate for lengthy periods.

The fly nuisance is aggravated by the inadequacy of bins in many properties, the dilapidated condition of some of the ash-bin shelters and the careless manner in which not a few householders deposit their refuse. It is not uncommon to see the refuse piled up in front of the bins and scattered over the courts by children.

In an effort to bring home to householders the dangers arising from careless disposal of refuse, handbills were distributed in those areas where this was most prevalent.

The enforcement of the Bye-laws regulating the cleansing of common passages and stairs entailed 5,556 visits, the issue of 7,030 rotation cards and the administration of 2,476 verbal warnings.

Limewashing and painting was carried out in 1,642 properties, requiring the issue of 1,411 notices. The remainder, 347, were done voluntarily by the owners.

Cisterns for the storage of water for dietetic purposes were inspected and 575 notices were issued where cisterns were found dirty.

Drainage.—The development of the Balornock and Robroyston Housing Scheme, the Milton Estate Housing Scheme and the Industrial Estate at Queenslie was responsible for continuous demands for tests to drainage.

The smoke test was applied on 806 occasions and general supervision while work was in progress required 3,218 visits.

By the end of the year 90 per cent. of the drains for the factories at Queenslie Industrial Estate had been installed consisting of 8,743 feet of 6 inch diameter and 1,706 feet of 4 inch diameter fireclay and cast-iron piping.

The sanitary fittings installed in new buildings under construction during the year include 901 water closets ; 19 sets of urinals ; 931 wash-hand basins ; 818 sinks ; and 766 baths.

The tendency to standardise expedients introduced into drainage because of shortages of material and of prefabrication at the end of the war is to be deplored. Reference is made particularly to the use of light metal piping for rain water conductors connected untrapped to soil drains ; the introduction within the building of fireclay piping ; the elimination of access openings at foot of soil pipes and waste pipes ; and the termination of waste water conductors at eaves gutters where they receive rainwater. While the danger of these practices to public health is difficult to prove, nevertheless it is present. Light metal piping on exposure to frost splits easily and in any case deteriorates quickly, and fireclay piping is liable to fracture on the settlement of the building, thus permitting the escape of drain air and liquid wastes. The Bye-laws regulating the installation of drainage do not extend to housing financed by Government grant and any representations made against these practices are put aside.

Housing.—In the Northern Division during 1948 757 houses were built, comprising 676 permanent, 81 temporary, and four were added to this total by the subdivision of two large houses.

The permanent houses included many types of the non-traditional construction, viz. : Weir Quality, Stuart, No Fines, B.I.S.F., Atholl and Orlitt. It is too early to pass an opinion on the suitability of these houses to our climatic and atmospheric conditions. No complaints have yet been received from those occupying them.

The last quota of the temporary houses has been erected and these have made a useful contribution to the housing requirements in the Division.

Since 1945, 1,136 permanent and 413 temporary houses have been built and occupied in the North—no mean achievement when all the circumstances are taken into consideration.

The time has now come when an effort should be made for the provision of houses to replace the worst of the unfit ones. Many of the uninhabitable houses occupied cannot last much longer on account of the accumulating disrepair and the harmful effect on the health of the inhabitants. When so many families had no homes scarce building materials could not be used to provide houses for those who did have some sort of shelter, but the time has now arrived when some consideration must be given to the slum dweller.

Thirty-three families were rehoused from uninhabitable dwellings during 1948. The dwellings had been represented as unfit in 1947, but the rehousing of the families was delayed until alternative accommodation became available.

Unfortunately it was not found possible to represent any houses under the Housing Acts during the year owing to the lack of alternative accommodation. Any houses suitable for rehousing were absorbed for families from dangerous properties condemned by the Dean of Guild Court. Five such properties were dealt with involving the rehousing of 56 families.

A survey of all residential properties was commenced during the latter part of the year and specific information recorded on a card prepared for the purpose. The completion of the survey will take a considerable time. So far, particulars of 240 properties have been recorded involving visits to 2,505 houses.

Housing (*Scotland*) *Act*, 1935.—The operations of the above Act resulted in the rehousing of 984 families in larger houses. This involved the transfer of 5,371 units or 5,853 persons.

Subsequent visits to the decrowded houses revealed that in 805 or 81·8 per cent. there was no longer overcrowding; in 122, or 12·4 per cent., overcrowding was reduced; in 16, or 1·63 per cent., it was unchanged, and in 41, or 4·16 per cent., it had increased.

As there is no control over the reletting of the decrowded houses these figures would seem to indicate that care is being taken by the various house factors in selecting suitable families for the accommodation available.

Abandoned Properties.—More properties were added to the number abandoned in previous years. These properties are a troublesome problem with regard to disrepair and the financial aspect is one of serious moment to the Department which has so far made itself responsible for the cost of abating nuisances affecting public health.

Prior to abandonment many of the properties were offered to the Corporation, but unless they can have a life of several years, the estimated cost of repairs is reasonable, and the ground burdens can be acquired, they are not accepted.

During 1948 thirty-five properties containing 456 dwelling-houses were offered, three were accepted, four refused, and negotiations for the acquisition of the ground burdens of the other 28 were in progress at the end of the year.

Rent Restrictions Acts.—The reluctance of some property owners to carry out repairs in dwelling-houses, especially those in the low rental categories, was reflected in the number of applications by tenants for certificates in terms of the Rent and Mortgage Restrictions Acts, 1919-1939. There were 190 applications for certificates and of these 167 were granted, 18 refused, and five withdrawn.

Thirteen applications for reports on completion of the work specified in the certificates were submitted by factors. Twelve were granted and one refused.

Many tenants who have been given certificates under the Acts fail to enforce them—some retaining them as a warrant for having an unsatisfactory house in order to justify their claim for a new house.

Supervision of Rehousing Schemes.—The nurse inspectors made 27,954 visits to the 6,549 houses in the various rehousing schemes in the Division. Generally it was found that tenants were maintaining the fairly good standard of house-keeping attained after their initial experience in better houses. There are the few difficult families who relapse and these are dealt with as found necessary.

Of the houses visited 66 per cent. were found to be in the clean category, 33 per cent. in the fair category, and 66 per cent. were dirty.

The comparative figures in the table hereunder and the analysis of the figures for the years 1936 and 1948 are consistent with a real increase in the percentage of clean houses under supervision.

Year.	Number of visits.	Houses found clean when visited.	Percentage clean.
1930	11,731	7,475	63·72
1936	20,489	13,152	64·19
1947	24,236	16,290	67·21
1948	27,326	18,194	66·58

	Percentage difference of clean houses	Standard Error	Ratio
1936 and 1948	2·39	0·44	5·43

A problem met with in many of the houses is the lodger family. While the householder may be amenable to the advice of the visiting nurse some of the lodger families are not. Many of the rooms occupied by these families are in a dirty and unsatisfactory condition and the families cause considerable overcrowding. Representations to the City Improvements Department to have the lodger families ejected is made more difficult by the fact that many of them are sons or daughters of the householder.

The table below gives some indication of the size of the problem and the overcrowding arising from it.

No. of Houses	No. with Lodgers	No. of Lodgers related to Householder	No. of Lodgers unrelated	No. of Houses overcrowded due to Lodgers
6,549	1,307 or 20%	887 or 13·52%	420 or 6·4%	793 or 12·09%

It is becoming increasingly apparent that the standard of house-keeping in many of the houses in the Intermediate Schemes leaves much to be desired. While it is not practicable to carry out a systematic visitation to all the households in these schemes, the unsatisfactory houses brought to the notice of the Department are visited and appropriate action taken to have the conditions improved.

Many houses in the Intermediate Schemes and some in the Ordinary Schemes are now being let to families whose standard of housekeeping is not much better than that of those who were rehoused from slum clearance areas before the war. These families would benefit greatly from visits by the housing nurse. It is hoped in the future to extend the visitation to all Intermeiate houses.

Inspection of School Children for Verminous Conditions.—The school nurses visited the schools under the supervision of the Division on 464 occasions and examined 18,531 boys and 13,801 girls for vermin infestation.

Five boys were found infested and 1,892 were found infected. Of the girls examined, ten were found infested and 2,880 were found infected.

There is no doubt that but for the frequency of examination, a much greater proportion of the children would be infested—especially girls.

The homes of those infested and those with recurrent infections were visited and the mothers advised as to the best manner of dealing with the condition—especially in other members of the family not attending school.

Dirty Houses.—It was necessary to deal with 58 householders who had permitted their houses and/or their bedding to become dirty. Fortunately the householders concerned were amenable to verbal warning or statutory notice and resort to Police Court proceedings was unnecessary.

The problem of the elderly person living alone and unable, because of age or ill-health, to maintain hygienic conditions in their homes was made increasingly apparent in the latter half of the year. Seven such cases were brought to our notice.

Where the old person concerned could attend to his or her personal wants and a relative or friend was willing to procure the food, look in occasionally and give some help, arrangements were made for the house to be cleansed, including whitewashing if necessary, by labour supplied by the Department and the washing of clothing and bedding carried out at intervals by the disinfecting station. Once the house was restored to a reasonable hygienic state a member of the staff visited periodically to see that this was maintained.

When the old person was confined to bed with illness and had refused hospital treatment arranged for by the medical practitioner, the problem was much more difficult. In one such case the District Nursing Association helped for a period but this was not found to be satisfactory and eventually the patient agreed to go into hospital. In another case the patient was certified mentally sick and was removed to a suitable institution.

The more difficult cases can now be dealt with under Section 47 of the National Assistance Act, 1948, which permits a Sheriff to grant an order on application by a Medical Officer of Health to remove compulsorily a person living in insanitary conditions.

This power must be used with considerable discretion and only when all other means to deal with the case have failed.

Rat Destruction.—Operations under the Rats and Mice (Destruction) Act, 1919, and Rats and Mice (Scotland) Order, 1943, went forward with increasing speed.

A scheme for systematic block control of rat infested premises was started in the late spring.

The area selected was part of the Townhead and Cowcaddens Wards extending to 430 acres. In selecting this area, largely industrial and residential, a note was made that within it was Buchanan Street Railway Terminus and Goods Station and that it was bounded by a branch of the Forth and Clyde Canal, also that frequent complaints of rat infestation were received by the Department.

So far the scheme has not brought to light any serious pockets of infestation and the percentage of premises found to be lightly infested has been comparatively small. The ratio of rats killed to the premises surveyed is comparable with other areas where the block control system has been in operation.

From the experience gained it is concluded that under normal conditions the rat population in a given area is light and widely scattered and it is only when there is ample food and water and undisturbed conditions that infestations reach serious proportions. This has been proved by the extent of some of the infestations which have been dealt with in premises outwith the scheme.

Premises surveyed for rat infestation during the year were 1,441, and 4,814 rats were destroyed.

Table Showing Rat Destruction Operation during 1948.

		Type of Premises			Found Infested			Degree of Infestation				
	No. of premises visited	Tenement (Houses)	Business	Factories	Tenements	Business	Factories	Light	Heavy	No. of Rats killed	No. of Premises rat-proofed	Premises reinfested.
Block Control Scheme ...	1,117	442	499	176	84	61	39	174	10	1,146	159	9
Outwith Scheme ...	324	199	86	39	196	80	39	311	13	3,668	236	4
Total ...	1,441	641	585	215	280	141	78	485	23	4,814	395	13

Factories including Bakehouses.—There was an increase in the number of factories on the Register at the end of the year, making the total under supervision 1,233. These comprise—

797 mechanical,
327 non-mechanical,
58 mechanical bakehouses, and
51 non-mechanical bakehouses.

The hygienic standard of the factories was found to be good and where it was necessary to bring to the notice of an occupier any want or defect, it was usually expeditiously dealt with. In all 2,369 inspections were made and 218 defects were found requiring the issue of 84 written notices.

Common Lodging Houses.—Strict supervision of the five common lodging houses in the Division was maintained during the year. It was necessary to bring to the notice of the proprietors the unhygienic condition into which one of the lodging houses had fallen through slackness on part of the keeper. This action had a salutary effect and conditions were greatly improved.

The Department came to the assistance of the management of another of the houses which had become heavily bug infested by sending in the D.D.T. Unit to carry out disinfestation. After a period of time had clapsed to allow the residual D.D.T. to take effect the house was entirely repainted. The result of this work was reflected in the higher standard of cleanliness in the general conduct of the lodging house.

The lodging houses provide accommodation for 1,579 persons. They were visited on 120 occasions and 43 nuisance conditions brought to the notice of the keepers were removed.

Tents, Vans and Sheds.—The sanction of the Corporation was granted to nine owners of land, permitting them to let it for the occupation by tents, vans, sheds or similar structures used for human habitation.

Satisfactory sanitary conditions were found existing on the 349 occasions on which the sites were visited.

Offensive Trades.—There are seven businesses conducting offensive trades in the Division, an addition of one to the total operating in 1947. These are tabulated hereunder :—

Bone Boilers and Tallow Melters	2
Hide and Skin Factors	1
Soap Boiler	1
Tanners	1
Horse Slaughterer	1
Knacker	1

While the businesses as a whole were being conducted in a satisfactory manner and without giving undue offence to the community it was necessary to direct the attention of the management of one to the dilapidated condition into which their premises had fallen. After a meeting a considerable amount of repairs was carried out, including the relaying of concrete floors and pointing of walls.

When conducting the investigation into the source of smells mentioned early in this report it was discovered that a firm was carrying on the business of soap boiling on a considerable scale. The sanction of the Local Authority to conduct the business as is required under the Public Health (Scotland) Act, 1897, had not been obtained. When this was pointed out to the firm concerned sanction to conduct the business was applied for. After the statutory procedure as laid down in the Public Health (Scotland) Act, 1897, had been followed the sanction sought for was given.

Sanitary Conveniences.—Unfortunately there has been no material change in the number of households using water closets in common and this black spot in our community is likely to continue until the general housing situation improves.

The number of water closets used in common is 9,337 of which 1,840 serve two tenants each, 5,353 three tenants, 1,825 four tenants and 319 five or more tenants.

There are 107 dry closets, including chemical closets, in use. Many are shared in common by two or more householders and a number are attached to business premises.

The number of privy-middens in use in the Division was greatly reduced by the conversion of a number of these to chemical closets at the instance of this Department. Eleven privy-middens remain, a reduction of 26.

There are still 89 houses without inside water supply—5 of one-apartment, 72 of two apartments, 11 of three apartments and 1 of four apartments.

It is appropriate that this report should conclude with some reference to the general statistics of the Division in view of the changes contemplated in the re-orientation of the municipal ward boundaries at the beginning of the year 1949.

When the city's boundaries were extended in 1937, the area of the Northern Division increased from 8,633 to 13,426 acres, an area equal to one third of that of the city. The area added was principally rural in character and brought many problems quite distinct from those met with in the Division previously.

The population at December, 1947, was 282,080, equal to 25·64 per cent. of the city's population, and housed in 72,213 houses, equal to 24·75 per cent. of the city's total.

While the density of population to the acre in the city averaged 28, that of the division was 21·0. In some parts of the Division, *e.g.*, Townhead and Woodside Wards, the density varied from 141 to 174 per acre.

The greater part of the houses were working class, made up as follows :—

1 apartment	10,317
2 apartments	32,196
3 apartments	21,296
4 apartments	6,389
5+ apartments	2,015

3,951 houses are considered unfit for human habitation.

With the formation of the new ward (Provan), which will be administered for sanitary purposes by the Eastern Division, a large area of the Division will be transferred, including the Carntyne, Riddrie and Blackhill Housing Schemes, the Queenslie Industrial Estate and the considerable undeveloped area eastwards to the city boundaries.

The new area of the Division will equal one fifth of the city's acreage with an estimated population of 246,786, a reduction of 35,294 on the previous population.

None of the major housing problems is being lost to the Division and the density of the population will rise from 21·00 per acre to 30·19 per acre, four per acre above the city's average.

Since the first World War, 19,176 houses have been built in the various Corporation Housing Schemes. Of these, 6,285 houses were for rehousing, 5,698 intermediate and 7,170 ordinary and temporary.

Education is provided in 79 schools for 45,903 scholars and 1,242 factories give employment to a large proportion of the population.

There are seven cemeteries.

Eastern Division.

The position with regard to abandoned properties was little changed during the year 1948. Although the number of properties abandoned during 1948 showed a decrease when compared with figures for 1947, a solution of the problem has not yet been obtained. Urgent matters of disrepair where the health of the public would be likely to suffer are dealt with by the Corporation, but the general unsatisfactory housing condition of the tenants who occupy the houses is mainly unaffected.

Heavy rainfall throughout the year had already shown flooding from the Camlachie Burn as early as July and when repeated flooding indicated that local cleansing of small stretches would be ineffective, it was decided to obtain the co-operation of the City Engineer's Department by having all the lower reaches of the burn surveyed. This survey proved of the greatest value in determining how much silt it will be necessary to remove at any given point and also the depth it will be necessary to reach in order to ensure that the bed of the burn has a free and uninterrupted flow.

The respective riparian owners were duly notified to cleanse their sections but as the burn continued in spate it was decided not to press the matter until the water had subsided sufficiently to enable cleansing operations to be properly carried out.

Routine inspection of the division for the detection of nuisances involved a total of 136,386 visits which resulted in the removal or abatement of 11,610 nuisances in terms of the Public Health (Scotland) Act. One such nuisance of a very interesting nature was discovered following a complaint by a shop-keeper that his premises were being infested with flies. An inspector investigating the complaint recognised the flies as belonging to the midge family Chironomidae. Specimens were taken for further investigation and identification which revealed that the midges were of the species Phychoda or Owl midge, which is a non-biter and breeds freely in damp surroundings where there is abundant decaying and putrifying matter.

Armed with this knowledge, the inspector arranged for a test of the drainage system and in addition had parts of the floor removed in order to inspect the solum. Here he found that an accumulation of sewage and waste matter entirely filled the space between the solum and the floor boards and literally thousands of midges were breeding there. The remedy included thorough cleansing of the underfloor space, levelling of the solum where required and repair of the defective drainage system and external wall. As a further precaution, a concrete floor was substituted after the underfloor space had been liberally treated with insecticide. Observations were carried out for a considerable time after completion of the work and no re-infestation took place.

Another nuisance which revealed circumstances of an unusual nature was the case of a shop where unpleasant smells were experienced. After much perseverance and determination on the part of the inspector making the investigation, the source of the trouble was found to be an escape of gas from a main pipe. This was discovered after tests had shown the branch mains to be tight and was actually traced from a point almost a quarter-of-a-mile distant from the shop where Post Office tradesmen had been laying an underground main and had also experienced the smell. In this case, the gas had followed the line of the cables to where the tradesmen were working.

In two cases calling for the removal of nuisances under the Public Health (Scotland) Act, 1897, it was necessary to resort to legal proceedings. One case involved the repair of a holed and broken wash-hand basin but the work being completed before the case was called in court, the case was withdrawn. The second case concerned disrepair in a dwelling-house where the tenant refused entry to have the repairs attended to. The case was taken to court and the Corporation were granted warrant for forcible entry to have the work carried out. Entry was then obtained and the work satisfactorily completed.

Visits to dietetic water storage cisterns were 1,229 and all notices requiring cleansing sent to owners were complied with without incident.

Cleansing of Common Stairs and Passages.—This is a branch of the inspector's duties which calls for constant vigilance and consequently takes up a good deal of time. Four thousand, three hundred and sixty-eight visits were made, 858 notices served and 896 verbal warnings given to the tenants about the conditions found.

In seven cases, verbal warnings and notices not being complied with, it was necessary to take the cases to court. Fines were imposed in four cases and in the remaining cases the parties were admonished.

Drainage.—The number of tests to old and new properties shows a small variation from last year's figures. Total number of tests carried out was 316 and the number of visits for the inspection of drainage systems and fittings was 2,893.

Rent Restrictions Acts.—Applications by tenants for Certificates in terms of the Rent Restrictions Acts show a big drop from last year, the figure being 39 as compared to 133 in 1947. This difference can be attributed to a number of factors, but perhaps the point having the greatest influence is a realisation that a Rent Restriction Certificate does not entitle the holder to priority consideration for a new Corporation house.

Of the 39 applications for Certificates, 33 were granted and six refused on the grounds that the houses were in a reasonable state of repair or that the repairs had been carried out by the owners when the disrepair had been brought to their notice.

Seventeen reports were granted to owners of property on the grounds that the houses had been repaired to the satisfaction of the Local Authority.

Housing.—The increase in building operations noted last year has not been fully maintained in the Eastern Division during 1948. The total for the year, 491 houses, is made up as follows :—

Weir Steel Houses	314	all of 4 apartments.
B.I.S.F. Houses	108	all of 4 apartments.
War Damaged Reconstructed	6	all of 3 apartments.
Aluminium Temporary	62	all of 3 apartments.
Owner Occupied	1	of 4 apartments

The number of families decrowded from houses in the division was 816 and of these follow-up visits showed that 192 of the vacated houses again became overcrowded by the incoming families. That is to say, 23·53 per cent. were again overcrowded and this percentage shows a slight drop from last year's figure of 26·36 per cent.

There were no representations for demolition or closing orders during the year and, of course, the time has not yet come when Clearance Areas can be considered.

Offensive Trades.—The position as regards the numbers of businesses established and sanctioned by the Local Authority remains unchanged from last year's figures, there still being 39 trades on the register, 30 of these operating as individual concerns and the remaining nine being concentrated with other businesses in accordance with the Government scheme.

Three hundred and forty-seven visits were made by the inspectorial staff and during the course of these visits 44 nuisances were brought to the notice of the owners and abated or removed without further action.

A very high degree of co-operation is obtained from the owners of the offensive trades so that infestations by insects and rodent pests are kept down to an absolute and highly satisfactory minimum.

Common Lodging Houses.—There are five common lodging houses for males, two for females and one boarding house for seamen, with a total sleeping accommodation for 2,544½ persons. Three hundred and sixty-three visits were made during the year, and the keepers were notified of defects in seven cases. Steps were immediately taken to have the defects remedied and the houses are well maintained and well ordered in all cases.

Farmed-out Houses.—These houses, of which there are 98 in the division, require a great deal of supervision to ensure that they are kept clean and maintained in a good state of repair. Six hundred and ninety-eight visits were made during the course of the year and 57 nuisances were discovered. These were removed immediately on being brought to the notice of the owners. Early detection and prompt action undoubtedly prevent issues of a major nature developing.

Piggeries.—No complaints were received, but regular inspections carried out resulted in nine nuisances being brought to the notice of the owners. Sixty-six visits were made during the year and in no case was it necessary to institute legal proceedings.

Sanitary Conveniences used in common.—There is a small reduction in the number of sanitary conveniences used in common by two or more tenants due to demolition of certain properties. The number of common w.cs. in the division is 8,618 ; dry closets in use number 6 ; and privy middens, 1. Houses without inside sink and water supply number 28, and ashpits remaining number 42.

The number of houses having inside bath, etc., is 18,591, an increase of 394 over the 1947 total, due entirely to building operations.

Factories.—New factories registered during the year and the total number on the register at 31st December, 1948, are as follows :—

	Mechanical Factories.	Non-Mechanical Factories.	Mechanical Bakehouses.	Non-Mechanical Bakehouses.
New ...	35	11	1	3
Total ..	756	135	56	23

The total number of visits to factories and bakehouses was 3,813. This resulted in the detection of 524 nuisances or contraventions of the Factories Acts and to their speedy removal on being brought to the notice of the person responsible.

In one case it was found necessary to institute legal proceedings as the owner failed to have alterations carried out which were necessary in order to conform with the requirements of the Factories Act but, as the work was completed by the time the case was due to be called in court, it was decided to take no further action. The case concerned w.c. accommodation which was in direct communication with the factory and the owner was required to make such alterations as would provide an adequate intervening ventilated space between the w.c. compartment and the factory.

Visits to shops in terms of the Shops Acts numbered 1,273 which was an increase over the figures for last year. One hundred and three nuisances were found and promptly removed or abated without incident.

Rat Infestations.—The highly successful rat extermination campaign carried on in co-operation with the Pests Destruction Branch of the Department of Agriculture has been adequately maintained. A total of 6,713 rats were destroyed and the total number of premises inspected was 7,134, of which 455 were showing evidence of the presence of rats and were consequently rendered rat-proof after the rats on the premises had been exterminated.

Details of the results of the campaign for the year are as follows :—

Number of Rats destroyed—

Black	—
Brown	3,508
Gassed or poisoned	3,158
Killed other than by Department of Agriculture	47
Total	6,713

Number of Premises showing evidence of Rats and treated—

Dwelling-houses	116
Foor premises	62
Other premises	277
Sewers	162 manholes
Total	617

These results show that although the area has been systematically gone over there are still some small pockets where infestations are fairly high and breeding is still going on. It is felt that the complete extermination of the rat population is impossible under present conditions but the number of rats is now being held in check and will show a steady and progressive decline over the next few years. This is very encouraging and shows that we have now gained control of the problem. It must, however, be pointed out that satisfactory rodent control is much easier when a system of rat-proofing is introduced into new building programmes.

It is far easier to rat-proof a new building than it is to rat-proof an old building where rat-proofing measures were ignored at the time of construction, and the increase in costs in the case of new buildings would be little or nothing, as it is more a case of better planning than one of additional materials. Perhaps the day is not too far off when rat-proofing will be recognised as essential in building science.

Tents, Vans and Sheds.—There are two sites within the Division approved for use by vans, etc. One is at Duke Street, where one van is permitted to be let for human habitation, and the other site is at Vinegarhill, Gallowgate. At the second site a number of vans can be accommodated and are used more or less as permanent residences by many travelling showmen. The Vinegarhill site housed an average of 58 vans during the year. Some 365 visits were made to these sites and on only two occasions was it necessary to issue warnings regarding the existence of nuisances in terms of the Public Health Acts.

I am pleased indeed to record that following the protest from this Department regarding the condition of the site at Fleshers' Haugh, Glasgow Green, where the carnival is usually held, properly constructed sanitary conveniences connected to the water carriage sewerage system have now been provided and there were no complaints of offensive odours, etc., received at this office during the period of the last carnival.

In March, 1948, it was discovered during routine inspection of the district that a caravan situated at 57 Biggar Street was being used for human habitation in contravention of the Bye-laws. Verbal and written warnings of this contravention were given to the owner and as no action was taken to put an end to the practice, legal proceedings were instituted. On finding that court action was pending the owner removed the van and discontinued the occupation and no further action was taken in the matter.

Squatter Families.—Squatter families were reduced to 24 at December, 1948. Those remaining were housed in premises which although not suitable for dwelling-houses at least provide wind and water-tight homes. Regular inspections of premises occupied by squatters is maintained and immediate steps taken to have any nuisances abated. It is usually found that the squatters co-operate well in these matters. A total of 71 visits was made during the year.

In addition to the above particulars, a party of nine squatter families moved into occupation of a condemned property at 7 Largs Street, which is scheduled for demolition in terms of the Housing (Scotland) Act, 1930. The occupation was reported to the Town Clerk's Department and court proceedings have been instituted as their occupation is preventing demolition of the property.

SOUTH-EASTERN DIVISION

Rat Infestation.—The war against rats is being pursued. The campaign embracing Gorbals and Hutchesontown which commenced in June, 1947, continued throughout the year. The scheme, although not yet finished, has made satisfactory progress.

Many difficulties had to be overcome. The age and construction of several properties made trapping by the Department of Agriculture for Scotland operators somewhat difficult and the inter-communication of the basements prevented complete rat-proofing. The house by house, shop by shop survey brought to light many accumulations of refuse under floors and in cellars which afforded harbourage to colonies of rats.

The determining factors in the rat population are food and shelter and if an abundant supply of food is available shelter in old properties is easily obtained. Much of the responsibility for infestations of tenements must be borne by the householders as the unsocial habit of throwing scraps of waste food over windows or in ash-bins is still prevalent.

Much help was given by property and business owners in the trapping and rat-proofing but unfortunately this work is greatly handicapped in older properties by the lack of money to meet the cost. Several dilapidated and disused wash-houses and cellars known to be infested were demolished. Good kills were obtained in each. In one disused wash-house fifty rats were destroyed. Altogether 15,922 visits were made, the results of which are shown in the accompanying table.

Premises Visited.

Area	Clear	Infested Light	Infested Heavy
Gorbals Scheme	1,521	849	18
Outwith Gorbals Scheme	—	6	9
	1,521	855	27

Rats Destroyed.

Area	Trapped	Poisoned	Gassed	Total Kill
Gorbals Scheme ...	3,551	885	33	4,469
Outwith Gorbals Scheme	250	184	—	434
Total	3,801	1,069	33	4,903
Sewers	—	3,590	—	3,590
Total Kill ...	3,801	4,659	33	8,493

Dirty Houses (*Glasgow Police Order*), 1904.—Visits under this heading, including private and municipal property, totalled 5,837. The 5,388 visits paid to the latter type include 5,219 systematic visits to rehousing schemes where, on 42 occasions, dirty conditions were found. On a number of other occasions the householders had to be warned. It is considered that these visits are valuable because of their effect in both respects, namely, the detection of dirty houses and the improvement of border line cases. A difficult problem is sometimes raised by solitary old people found dwelling in verminous conditions. There may be neither friends nor voluntary workers interested and the house may be too dirty for routine cleaning by home helps. It then falls to the Department to try to make special arrangements in each case ; but it would be preferable to have an organised group of special volunteer cleaners willing to tackle such duties on occasions in co-operation with the Department's Disinfestation Unit.

A more difficult problem is that of finding hospital accommodation for neglected cases (usually females) of illness, mental affection or bedridden senility. The neglect is reported here and the quest of hospital admission then becomes an urgent responsibility. When the general hospitals were departmental timely admission prevented unpleasant sequels. To continue to prevent these it seems necessary that the Public Health Department should continue to be able to admit certain patients to general hospitals at short notice.

An increasing amount of time is spent in almoning for " problem " families. Circumstances of neglect arise in many households from the poverty or physical or mental incapacity of the parents or from chronic disability of a member of the family. The circumstances are detected in various ways, such as at school inspections by the nurse inspectors, in routine inspection, from rehousing applications or after messages of complaint. Considerable trouble is then taken to make a full investigation to render available all the facilities of the Department and to establish appropriate contacts as with the Corporation Social Welfare Department, the National Assistance Board, the Health and Education Services, Church and other social organisations. Wholehearted co-operation is regularly received but it is in connection with these families that the need for voluntary social workers is most keenly felt.

Factories Act Inspections.—The premises registered in terms of the Factories Act, 1937, are made up as follows :—

Mechanical Factories	584
Non-mechanical Factories	324
Mechanical Bakehouses	58
Non-mechanical Bakehouses	27
Total	993

Fifty-one new factories and five bakehouses were added; while sixteen factories and one bakehouse were removed during the year. Regular inspections totalling 1,954 were made, resulting in 187 defects being remedied.

Drain Testing.—The smoke test was applied to the drainage system of 495 new buildings. The increase from the previous year is considerable and is largely due to the acceleration in the house building programme and the release of building materials.

Nuisances.—The total number of inspections made during the year under this heading was 79,575, resulting in the discovery and removal of 7,835 nuisances. These formed a varied assortment among which choked drains, as usual, predominated. In only four cases was it necessary to take court proceedings. Each case was successfully concluded.

Rivers Pollution Prevention.—Under the present restriction on expenditure on sewage as on other works throughout the country, vigilance is needed regarding the state of rivers and streams entering the City. The co-operation of neighbouring authorities has been readily obtained. In connection with two streams entering suburban Glasgow parks, the county authorities have undertaken in one case to redirect an effluent pipe for a considerable distance to a more hygienic point of discharge and in the other to improve storm overflow apparatus and make other alterations at one of their works. One of these streams, which forms part of the City boundary, was also the scene of dumping unwanted rags through a convenient window by the employees of a flock mill situated on the county bank. After high water these rags festooned the shores and islets of the river. The County Authorities on request took steps to end this practice.

Rural Water Supply.—In the last boundary extension a semi-rural area was acquired where development was prevented by the war. A survey of the sanitary services to the farms, steadings and occupied dwelling-houses in this area revealed that several of the premises obtained their water supply from wells or springs and it was considered that a supply, free from danger of contamination, should be installed wherever practicable. It has now become possible to recommend arrangements for the piping of public county water into several of the farms and dwellings.

The piping of public county water for a distance of several hundred yards has also been obtained for an isolated Children's Institution whose private water supply had previously required to be kept under supervision. Plans have also been made for storing county mains water and supplying it to the public in a rurally situated Glasgow park whose springs will eventually go into disuse except for ornament.

Cleansing of Closes and Stairs.—Much time is spent attending to complaints of this nature as is evidenced by the fact that each district inspector made 538 visits during the year or approximately two visits each working day. A verbal warning to the offenders or the issue of the rotation cards is generally sufficient but occasionally further proceedings are necessary. During the year proceedings in 32 instances were taken before the courts, resulting in 27 tenants being found guilty of whom 15 were admonished and 12 were fined. Four cases were deserted owing to the removal or the death of the respondents. One case was found not proven.

Rent Restrictions Certificates.—Applications for certificates under the Rent Restrictions Acts were received from 35 tenants. Of these 15 were granted, 16 refused and 2 withdrawn. Two applications have been carried forward to 1949. Two reports were granted to landlords on request.

Limewashing of Closes and Staircases.—In order to bring up to date the register of limewashings which had suffered some gaps during the war and post war years, a complete survey of all closes was made. This led to 881 notices to limewash being issued. Not all secured compliance by the end of the year ; the 393 outstanding have been carried forward to next year.

Verminous Children.—For the purpose of examining the bodily condition of school children, 105 visits were made to schools during the year when 152 children were found to be seriously infested and 1,883 infested to a lesser degree. The bodies and clothing of 45 children were found to be in a dirty condition. On 344 occasions follow-up visits were made to the homes of infested children and in only seven cases was it necessary to have the children cleansed by the Department.

SOUTH-WESTERN DIVISION

Nuisances.—The general sanitary conditions of the Division show a steady improvement. The principal nuisances which far outnumber all others are disrepair in dwelling-houses, choked drains, dirty closes and stairs, dirty walls of common passages and stairs and vermin infested premises. The latter type of nuisance is chiefly bug and cockroach infestation, a problem in which the Department are now very interested, having set up a special Disinfestation Unit which assists both owners and tenants of dwelling-houses to eliminate the vermin. This new specialised treatment, which is free of charge to owner or occupier of dwelling-houses, is carried out without removal of infested wood or plaster and is speedily done without undue disturbance to the household or furnishings.

There was no undue delay in the removal of nuisances dealt with during the year and none of them calls for special comment.

Drainage is satisfactory and all tenement property has water closet accommodation.

Housing.—The new Corporation housing schemes in the Division are rapidly taking shape ; 68 five-apartments, 671 four-apartments and 475 three-apartments were completed during the year.

Systematic visits are made by the Nurse Inspectresses to the houses in rehousing schemes with satisfactory results. The visits by the nurses to the houses in these schemes are welcomed by the majority of the people, as the nurses not only advise on cleanly habits, but are able to assist on matters pertaining to their profession.

The sub-letting of houses shows no sign of diminution, mainly due to lack of houses. It is possible in some cases to stop this subletting by calling the factor's attention to the mode of occupancy, but the outcome of such action is merely to remove the lodgers to some other sub-let. The greater part of these lodgers have never been householders.

Rat Infestation.—Complaints are received by the Department of rat infestation by shop-keepers, householders and factories. Isolated infestations are dealt with by proofing and trapping and where large areas are affected these are passed to the Department of Agriculture (Pest Destruction Branch) for treatment. The actual known " kill " for the year in the Division was 4,718 rats.

Shops Act.—A re-survey of shops under the 1934 Act was started and numerous changes of occupancy were noted. In many instances the changes resulted in the installation of water closets and alterations to those at present in existence.

Burial Grounds.—On 1st April, 1948, the bodies of six Norwegian sailors were exhumed from Cardonald cemetery, one being forwarded to Norway for reburial, the other five being conveyed to the Glasgow crematorium. The exhumation took place under atrocious weather conditions but the full requirements as laid down by Statute were observed.

The burial grounds in the Division are inspected at intervals and are found to be well kept, the bye-laws being observed.

Factories.—There are 716 factories in the Division. Mechanical bakehouses number 30 and non-mechanical 20. Two bakehouses are of the underground type and all were inspected at frequent intervals during the year. Defects, minor nuisances or cleansing were promptly dealt with on the occupier's attention being drawn to the matter.

Common Lodging Houses.—Regular inspections of these lodging houses were made. While they are generally well kept, contraventions of the bye-laws arise and constant supervision is necessary.

Brokers.—Brokers' premises must have the approval of this Department before a licence is granted. There are eight licensed premises in the Division.

Rent (Restrictions) Acts.—Applications for certificates showed a sharp downward trend during the year. Of the eighteen applications received thirteen were granted and five refused. Owners requested reports on thirty occasions and all were granted. In many instances owners are prepared to face the decreased rentals rather than carry out repairs, many of which are not enforcable under the Public Health Acts.

Piggeries.—There are two piggeries in the Division with accommodation for 391 pigs. The premises are well kept and nuisance conditions seldom arise.

Decrowding.—Rehousing of overcrowded families and families from condemned property still continues fairly steadily. 701 such families were rehoused during the year, including 139 lodger families—642 from private property and 59 from Corporation houses. Overcrowding was abated in 563 cases, reduced in 112, unchanged in 19 and increased in 7.

Squatters.—These premises require constant supervision, mainly in the interest of the occupiers. The destruction of fittings in some cases is fairly heavy and in one instance, where the public also have access to the sanitary conveniences, the misuse and destruction are, to say the least, scandalous. Replacement of fittings in these instances is sometimes impracticable, especially where there is no owner of the premises and the occupiers must either club together to pay for damaged fittings or do without.

Homeworkers.—Systematic quarterly inspection of the houses of persons engaged in homework was made and conditions were found to be satisfactory.

Offensive Trades.—There were no outstanding features to report in connection with the businesses in this Division.

Dietetic Storage Cisterns.—The annual inspection of dietetic storage cisterns was made and nuisance conditions found were speedily remedied.

OFFENSIVE TRADES.

All but one of the 52 businesses on the register of offensive trades in the city at 31st December are now in operation. This exception is the only one remaining closed of several businesses which were closed during the war as a result of concentration of business under the Defence Regulations.

One new soap boiler's business was sanctioned at the end of the year.

The nature of the businesses is shown in the following statement :—

	1948.
Bone boilers	7
Tallow melters	11
Manure manufacturers	2
Gut cleaners	4
Hide and skin factors	8
Soap boilers	6
Tanners	9
Glue and size manufacturers	1
Horse slaughterer	1
Knacker...	1
Blood boiler	1
	52

DISINFECTION.

The following table summarises the washings and disinfections carried out at Ruchill and Belvidere Disinfecting Stations during the year 1948 :—

	Belvidere.	Ruchill.	Total.
Number of washings	8,733	9,981	18,714
Average number per day	28·7	32·30	30·5
Articles washed and disinfected	278,801	365,239	643,940
Average number of articles per washing ...	31·9	36·6	34·4
Fuel consumed (tons)...	558	487	1,045
Fuel used per article (lbs.)	4·48	2·96	3·63
Soap and powder used per article (ozs.) ...	0·17	0·17	0·18
Disinfectant used per article (ozs.) ...	0·56	0·46	0·55

Number of Washings, Articles Disinfected, etc., for Years 1938-48 *Inclusive.*

	Washings.	Articles.	Houses, etc., Disinfected.	White-washings.	Library and School Books Disinfected.
1938 ...	19,088	665,641	12,457	2	1,602
1939 ...	18,189	681,074	10,419	—	1,550
1940 ...	26,780	841,572	12,427	14	1,346
1941 ...	25,106	903,562	10,494	4	1,319
1942 ...	27,095	104,945	11,101	1	1,956
1943 ...	24,981	894,119	11,207	1	2,004
1944 ...	23,513	803,748	11,056	1	1,763
1945 ...	21,756	742,306	10,840	—	1,498
1946 ...	19,623	646,690	9,430	2	3,026
1947 ...	19,680	610,506	9,796	5	1,618
1948 ...	18,714	643,940	10,103	4	1,647

Disinfection of Second-hand Clothing, etc.—The export of second-hand clothing to Ireland declined sharply during 1948—possibly as a result of the refusal of exporters to comply with the requirements of the Irish authorities in regard to disinfection.

Another firm has now opened an export trade in cast-off clothing with India and Africa and the bulk of the consignments disinfected by this Department in 1948 were despatched to these countries.

The increase in amount of fees paid reflects the increased cost of the disinfectants used in recent years.

	No. of Consignments.	Fees paid.
1939	375	£86 0 0
1940	310	77 1 4
1941	122	28 3 8
1942	19	5 5 7
1943	1	0 5 0
1944	—	—
1945	—	—
1946	210	51 11 3
1947	604	213 13 6
1948	351	148 7 10

APPENDIX

TABLE I.—GLASGOW, 1948.—ESTIMATED POPULATION IN EACH MUNICIPAL WARD, ACREAGE, AND PERSONS PER ACRE.

MUNICIPAL WARDS	POPULATION				Acreage	Persons per acre (including Inst'ution and Shipping
	Without Institutions and Shipping	Institu-tions	Shipping	Total		
1. Shettleston and Tollcross ...	39,168	177	—	39,345	1,167	34
2. Parkhead ...	21,786	560	—	22,346	819	27
3. Dalmarnock ...	40,879	52	—	40,931	487	84
4. Calton ...	26,953	1,804	—	28,757	404	71
5. Mile-end ...	38,817	407	—	39,224	443	89
6. Dennistoun ...	29,975	23	—	29,998	689	44
7. Provan ...	21,515	1,536	—	23,051	4,846	5
8. Cowlairs ...	28,719	1,184	—	29,903	645	46
9. Springburn ...	25,248	2,710	—	27,958	2,118	13
10. Townhead ...	35,489	2,127	—	37,616	301	125
11. Exchange ...	19,481	4,321	18	23,820	507	47
12. Anderston ...	31,795	1,565	806	34,166	530	64
13. Park	30,407	598	—	31,005	317	98
14. Cowcaddens ...	27,015	672	1	27,688	488	57
15. Woodside ...	28,123	566	—	28,689	170	169
16. Ruchill ...	40,529	852	2	41,383	1,962	21
17. North Kelvin	28,072	275	—	28,347	278	102
18. Maryhill ...	24,027	1,171	4	25,202	2,210	11
19. Kelvinside ...	24,784	1,381	—	26,165	1,160	23
20. Partick (East)	28,478	968	—	29,446	351	84
21. ,, (West)	28,192	—	123	28,315	464	61
22. Whiteinch ...	25,203	697	13	25,913	894	29
23. Yoker ...	29,762	30	—	29,792	1,213	25
24. Knightswood	17,402	176	—	17,578	1,614	11
25. Hutchesontown	31,226	14	—	31,240	387	81
26. Gorbals ...	38,552	297	—	38,849	252	154
27. Kingston ...	27,786	309	163	28,258	355	80
28. Kinning Park	29,684	163	245	30,092	402	75
29. Govan ...	34,500	248	—	34,748	489	71
30. Fairfield ...	23,868	1,657	104	25,629	1,351	19
31. Craigton ...	41,795	402	—	42,197	1,566	27
32. Pollokshields	24,277	2,257	—	26,534	3,239	8
33. Camphill ...	27,673	80	—	27,753	481	58
34. Pollokshaws ...	24,910	389	—	25,299	3,223	8
35. Govanhill ...	28,812	508	—	29,320	365	80
36. Langside ...	27,988	1,000	—	28,988	801	36
37. Cathcart ...	24,246	209	—	24,455	2,737	9
CITY	1,077,136	31,385	1,479	1,110,000	39,725	28

TABLE II.—GLASGOW, 1948.—INHABITED AND UNOCCUPIED HOUSES IN EACH MUNICIPAL WARD.

MUNICIPAL WARDS	INHABITED HOUSES*				Empty Houses
	1948	1947	Decrease	Increase	
1. Shettleston and Tollcross...	10,386	11,748	1,362	—	6
2. Parkhead	5,750	10,131	4,381	—	2
3. Dalmarnock	12,350	8,087	—	4,263	—
4. Calton...	7,220	6,027	—	1,193	1
5. Mile-end	11,476	10,283	—	1,193	2
6. Dennistoun	8,281	7,211	—	1,070	10
7. Provan	5,368	11,800	6,432	—	13
8. Cowlairs	8,391	6,246	—	2,145	3
9. Springburn	6,604	6,747	143	—	4
10. Townhead	9,906	6,107	—	3,799	3
11. Exchange	4,880	5,410	530	—	8
12. Anderston	8,547	8,582	35	—	5
13. Park	6,693	6,715	22	—	26
14. Cowcaddens ...	7,720	7,763	43	—	4
15. Woodside	8,314	8,328	14	—	11
16. Ruchill	9,843	12,238	2,395	—	1
17. North Kelvin ...	8,479	6,028	—	2,451	13
18. Maryhill	6,907	6,896	—	11	4
19. Kelvinside	7,176	8,833	1,657	—	78
20. Partick (East) ...	7,458	6,665	—	793	23
21. ,, (West) ...	8,646	6,583	—	2,063	4
22. Whiteinch	6,860	9,286	2,426	—	5
23. Yoker	7,653	10,346	—	1,645	2
24. Knightswood ...	4,338				4
25. Hutchesontown ...	9,667	9,667	—	—	—
26. Gorbals	9,553	9,602	49	—	7
27. Kingston	7,456	6,138	—	1,318	—
28. Kinning Park ...	8,262	8,309	47	—	4
29. Govan...	9,385	9,006	—	379	4
30. Fairfield	6,600	8,336	1,736	—	1
31. Craigton	10,469	15,234	—	1,186	11
32. Pollokshields ...	5,951				18
33. Camphill	7,968	6,053	—	1,915	12
34. Pollokshaws	5,917	7,727	1,810	—	6
35. Govanhill	8,464	8,469	5	—	3
36. Langside	7,810	5,243	—	2,567	10
37. Cathcart	7,066	9,563	2,497	—	6
CITY	293,814	291,407	—	2,407	314

* Includes inhabitant occupiers.

he alteration of the boundaries of several wards should be taken into consideration in comparing the above figures.

TABLE III.—GLASGOW.—LININGS GRANTED BY DEAN OF GUILD COURT IN YEARS FROM 1919 IN RESPECT OF HOUSES.

Year ending 31st August.	Number of Apartments						Total.
	1.	2.	3.	4.	5.	6.	
1919-20 (Annual Average)	—	6	692	246	107	29	1,080
1921-25 (do.)	—	308	638	400	234	51	1,631
1926-30 (do.)	—	350	3,067	1,346	448	90	5,301
1931 ...	—	122	2,220	1,900	38	26	4,306
1932 ...	33	529	3,464	1,251	70	4	5,351
1933 ...	—	270	1,845	3,162	337	23	5,637
1934 ...	34	603	1,825	787	80	52	3,381
1935 ...	—	220	2,082	792	128	9	3,231
1936 ...	—	—	1,462	1,320	290	12	3,084
1937 ...	—	2	687	847	301	34	1,871
1938 ...	—	—	2,017	3,068	824	50	5,859
1939 ...	—	—	2,159	3,324	717	2	6,202
1940-43 ...	—	—	—	—	—	—	—
1944 ...	36	—	—	5	1	—	42
1945 ...	—	—	79	94	5	—	178
1946 ...	33	—	812	2,503	483	12	3,843
1947 ...	—	89	115	994	232	—	1,430
1948 ...	54	24	126	365	2	—	571

TABLE IV.—ABSTRACT OF METEOROLOGICAL OBSERVATIONS TAKEN AT SPRINGBURN PUBLIC PARK.

Months. 1948.	Temperature.			Rainfall.		Sunshine
	Highest Temp. in Shade.	Lowest Temp. in Shade.	Mean Temp.	No. of Days.	Amount Collected in inches.	Hours.
January ...	51	25	36·8	26	6·13	19·5
February ...	54	27	39·4	17	4·01	57·9
March ...	69	29	44·9	17	3·10	86·2
April ...	62	34	46·8	18	3·21	124·7
May ...	80	29	51·5	13	1·54	220·1
June ...	76	42	55·1	22	4·89	143·1
July ...	85	42	59·3	14	3·17	190·4
August ...	69	41	56·7	22	6·61	73·4
September ...	66	34	53·9	24	6·60	94·2
October ...	63	29	48·2	22	5·19	80·8
November ...	57	25	43·8	18	3·38	37·5
December ...	56	28	40·3	20	5·50	28·7
1938	76	20	48·1	242	49·76	1,174
1939	88	18	47·6	212	38·41	1,177
1940	85	6	46·5	210	39·52	1,111
1941	80	12	46·3	204	33·34	1,035
1942	80	18	46·3	220	40·64	1,067
1943	86	23	48·0	252	45·43	1,094
1944	80	21	47·3	231	44·44	953
1945	81	11	48·6	233	43·62	1,199
1946	77	19	47·3	222	39·93	1,220
1947	86	8	46·7	209	38·63	1,086
1948	85	25	48·1	233	53·33	1,157

Table V.—Glasgow.—BIRTHS and Birth-rates *per Million* in each Ward, for the year 1948, and Number and Percentage of Illegitimate Births.

Municipal Wards.	Births 1948	Birth-rate 1948	Birth-rate 1947	Illegitimate Births. No.	Illegitimate Births. % Total Births.
1. Shettleston and Tollcross ...	876	22,264	24,334	51	5·8
2. Parkhead	386	17,274	24,975	16	4·1
3. Dalmarnock	1,081	26,410	27,050	55	5·1
4. Calton	680	23,646	27,124	51	7·5
5. Mile-end	1,014	25,851	27,985	54	5·3
6. Dennistoun	492	16,402	20,274	26	5·3
7. Provan	377	16,355	24,156	21	5·6
8. Cowlairs	696	23,275	23,084	34	4·8
9. Springburn	456	16,310	19,254	22	4·8
10. Townhead	873	23,214	25,912	43	4·9
11. Exchange	459	19,269	27,663	58	12·6
12. Anderston	801	23,444	24,246	46	5·7
13. Park	393	12,675	24,229	52	13·2
14. Cowcaddens	726	26,221	28,109	48	6·6
15. Woodside	713	24,853	28,065	53	7·4
16. Ruchill	887	21,434	23,647	44	5·0
17. North Kelvin	535	18,873	23,144	29	5·4
18. Maryhill	576	22,855	23,943	35	6·1
19. Kelvinside	287	10,969	16,647	7	2·4
20. Partick (East)	415	14,093	24,324	10	2·4
21. ,, (West)	606	21,402	20,579	30	4·9
22. Whiteinch	465	17,945	18,818	20	4·3
23. Yoker	478	16,044	20,102	15	3·1
24. Knightswood	288	16,384		14	4·9
25. Hutchesontown...	788	25,224	27,594	37	4·7
26. Gorbals	1,080	27,800	30,291	99	9·2
27. Kingston	727	25,727	28,159	47	6·5
28. Kinning Park	748	24,857	28,235	45	6·0
29. Govan	928	26,706	27,707	54	5·8
30. Fairfield	476	18,573	20,348	18	3·8
31. Craigton	609	14,432	20,319	17	2·8
32. Pollokshields	326	12,286		11	3·4
33. Camphill	354	12,755	15,722	10	2·8
34. Pollokshaws	476	18,815	23,588	25	5·3
35. Govanhill	480	16,371	19,219	22	4·6
36. Langside	375	12,936	18,223	8	2·1
37. Cathcart	304	12,431	14,780	6	2·0
Institutions	61	—	—	32	—
Harbour	—	—	—	—	—
City	22,292	20,083	23,481	1,265	5·7

ving to redivision of wards comparison with previous years is only approximate. (Rates for 1947 have been recalculated on 1948 basis).

TABLE VI.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* IN EACH MUNICIPAL WARD, FOR THE YEAR 1948, AND CORRESPONDING RATES FOR 1947.

MUNICIPAL WARDS.	Deaths 1948	Death-rates 1948	Death-rates 1947
1. Shettleston and Tollcross ...	470	12,000	12,790
2. Parkhead	269	12,347	12,688
3. Dalmarnock	516	12,623	12,700
4. Calton	376	13,950	16,062
5. Mile-end	486	12,520	14 693
6. Dennistoun	363	12,110	14,072
7. Provan	248	11,527	14,187
8. Cowlairs	373	12,988	12,023
9. Springburn	292	11,565	13,095
10. Townhead	443	12,483	14,868
11. Exchange	270	13,860	17,027
12. Anderston	410	12,895	14,013
13. Park	328	10,787	14,019
14. Cowcaddens	301	11,143	13,281
15. Woodside...	356	12,659	15,534
16. Ruchill	458	11,301	11,975
17. North Kelvin	353	12,575	13,039
18. Maryhill	319	13,277	12,909
19. Kelvinside	247	9,966	13.172
20. Partick (East)	328	11,518	15,515
21. ,, (West)	353	12,521	13,613
22. Whiteinch	301	11,943	13,499
23. Yoker	296	9,946	12,434
24. Knightswood	184	10,573	
25. Hutchesontown	373	11,945	13,330
26. Gorbals	492	12,762	15,608
27. Kingston	337	12,128	13,873
28. Kinning Park	338	11,387	13.480
29. Govan	460	13,333	12,893
30. Fairfield	247	10,349	11,709
31. Craigton	398	9,523	12,919
32. Pollokshields	283	11,657	
33. Camphill	351	12,684	15.236
34. Pollokshaws	260	10,438	12,512
35. Govanhill...	362	12,564	12,890
36. Langside	314	11,219	14,762
37. Cathcart	274	11,301	14,161
Institutions	781	—	—
Harbour	10	—	—
CITY	13,620	12,270	13.879

Owing to redivision of wards comparisons with previous years is only approximate.

(Rates for 1947 recalculated for new wards).

TABLE VII.—GLASGOW.—NUMBER OF OUTWARD AND INWARD TRANSFER DEATHS FOR THE YEAR 1948.

CAUSE OF DEATH.	Outward Transfers	Inward Transfers
1. Typhoid and Paratyphoid Fevers	1	—
2. Cerebrospinal Fever	3	1
3. Scarlet Fever	—	—
4. Whooping Cough	2	—
5. Diphtheria	2	—
6. Erysipelas	—	—
7. Tuberculosis of Respiratory System	45	114
8. Tubercular Meningitis	37	7
9. Abdominal Tuberculosis	3	4
10. Other Tuberculous Disease	13	5
11. Syphilitic Disease	8	3
12. Influenza	2	—
13. Measles	2	1
14. Acute Poliomyelitis and Polioencephalitis	—	1
15. Acute Infectious Encephalitis	4	1
16. Cancer—all forms	360	67
17. Diabetes	29	4
18. Intra-cranial Vascular Lesions	90	50
19. Other Nervous Diseases	29	34
20. Heart Disease	193	134
21. Other Diseases of Circulatory System	34	8
22. Bronchitis	9	5
23. Pneumonia	51	15
24. Other Respiratory Diseases	13	3
25. Ulceration of the Stomach and the Duodenum ...	52	5
26. Diarrhoea (under 2 years)	32	—
27. Appendicitis	32	—
28. Other Digestive Diseases	131	9
29. Nephritis	48	8
30. Puerperal and Post-abortive Sepsis	—	1
31. Other Maternal Causes	6	3
32. Premature Birth	40	14
33. Congenital Malformations, Birth Injury, Infantile Disease	76	12
34. Suicide, Road Traffic Accidents, and other Violent Causes	99	52
35. All Other Causes	201	68
TOTAL	1,647	629

TABLE VIII.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* FROM DIFFERENT CAUSES, FOR THE YEAR 1948, AND CORRESPONDING RATES FOR 1947 AND 1946.

CAUSE OF DEATH.	Deaths	Annual Death-rate per Million.		
	1948	1948	1947	1946
1. Typhoid and Paratyphoid Fevers ...	—	—	3	4
2. Cerebro-spinal Fever	15	13	20	24
3. Scarlet Fever	3	3	4	1
4. Whooping Cough	7	6	70	19
5. Diphtheria	8	6	12	34
6. Erysipelas	5	6	4	12
7. Tuberculosis of Respiratory System	1,267	1,142	1,066	1,102
8. Tubercular Meningitis	77	69	152	145
9. Abdominal Tuberculosis	32	29	19	14
10. Other Tuberculous Diseases ...	41	37	53	66
11. Syphilitic Disease	45	41	68	65
12. Influenza	37	33	74	149
13. Measles	23	21	14	22
14. Acute Poliomyelitis and Polioencephalitis	3	3	22	3
15. Acute Infectious Encephalitis ...	25	23	22	14
16. Cancer—All forms	2,084	1,877	1,841	1,767
17. Diabetes	147	132	132	158
18. Intra-cranial Vascular Lesions ...	1,388	1,250	1,254	1,232
19. Other Nervous Diseases	247	223	272	282
20. Heart Disease	3,489	3,143	3,417	3,242
21. Other Diseases of Circulatory System	313	282	276	271
22. Bronchitis	245	221	351	320
23. Pneumonia	493	444	665	661
24. Other Respiratory Diseases ...	140	126	131	142
25. Ulceration of the Stomach and the Duodenum	106	95	111	100
26. Diarrhoea (under 2 years)	250	225	522	274
27. Appendicitis	35	32	24	30
28. Other Digestive Diseases	287	259	304	257
29. Nephritis	222	200	202	230
30. Puerperal and Post-abortive Sepsis	9	8	14	17
31. Other Maternal Causes	27	24	43	50
32. Premature Birth	369	332	392	408
33. Congenital Malformations, Birth Injury, Infantile Diseases ...	320	287	397	361
34. Suicide, Road Traffic Accidents, and other Violent Causes	544	490	502	514
35. All other Causes	1,317	1,187	1,426	1,500
36. Smallpox	—	—	—	—
ALL CAUSES	13,620	12,270	13,879	13,490

TABLE X.—GLASGOW, 1948.—DEATHS OCCURRING IN INSTITUTIONS FOR THE TREATMENT OF THE SICK, NURSING HOMES, &C.

CAUSE OF DEATH.	Local Authority General Hospitals and Poorhouses.	Local Authority Fever Hospitals and Sanatoria.	Local Authority Mental Hospitals.	Voluntary Hospitals and Infirmaries.	Nursing Homes, &c.	Totals.	% of all Deaths.	Outward Transfer Deaths.
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	1
2. Cerebrospinal Fever ...	2	7	—	3	—	12	80·0	3
3. Scarlet Fever	—	2	—	—	—	2	66·7	—
4. Whooping Cough	—	4	—	—	—	4	57·1	2
5. Diphtheria	—	7	—	—	—	7	87·5	2
6. Erysipelas	1	3	—	—	—	4	80·0	—
7. Tuberculosis of Respiratory System	119	411	40	60	2	632	49·9	43
8. Tubercular Meningitis ...	1	44	2	28	—	75	97·4	37
9. Abdominal Tuberculosis ...	5	3	2	13	—	23	71·9	3
10. Other Tuberculous Disease	4	16	1	9	—	30	73·2	13
11. Syphilitic Disease	20	1	6	9	—	36	80·0	8
12. Influenza	1	2	—	—	—	3	8·1	2
13. Measles	—	15	—	1	—	16	69·6	2
14. Acute Poliomyelitis and Polioencephalitis ...	—	2	—	1	—	3	100·0	—
15. Acute Infectious Encephalitis	13	—	2	1	—	16	64·0	4
16. Cancer—all forms	439	43	18	435	35	970	46·5	348
17. Diabetes	40	3	1	30	3	77	52·4	28
18. Intracranial Vascular Lesions	294	17	31	139	30	511	36·8	80
19. Other Nervous Diseases ...	65	16	26	30	11	148	59·9	28
20. Heart Disease	485	52	73	232	89	931	26·7	154
21. Other Diseases of Circulatory System	122	6	5	49	2	184	58·8	31
22. Bronchitis	69	8	4	20	1	102	41·6	9
23. Pneumonia	127	117	7	28	8	297	60·2	48
24. Other Respiratory Diseases	27	7	9	24	3	70	50·0	12
25. Ulceration of the Stomach and the Duodenum ...	18	—	—	62	—	80	75·5	52
26. Diarrhoea (under 2 years) ...	43	99	—	54	1	197	78·8	31
27. Appendicitis	1	1	—	30	2	34	97·1	32
28. Other Digestive Diseases ...	50	8	1	160	5	224	85·0	131
29. Nephritis	56	7	5	46	2	116	52·2	47
30. Puerperal and Post-abortive Sepsis	3	2	1	1	1	8	88·9	—
31. Other Maternal Causes ...	6	3	3	14	1	27	100·0	6
32. Premature Birth	184	51	11	48	19	313	84·8	38
33. Congenital Malformations, Birth Injury, Infantile Disease	110	21	6	70	20	227	70·9	74
4. Suicide, Road Traffic Accidents, and other Violent Causes	55	—	—	191	5	251	46·1	81
5. All Other Causes	308	27	23	225	27	610	46·3	179
YEAR 1948	2,668	1,005	277	2,023	267	6,240	45·82	1,529
YEAR 1947	3,022	1,334	312	2,166	241	7,075	46·33	1,630

TABLE IX.—Glasgow, 1948.—DEATHS from

CAUSE OF DEATH.	MALES.													Total Males
	−1	−2	−5	−10	−15	−20	−25	−35	−45	−55	−65	−75	75+	
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Cerebro-spinal Fever ...	3	1	—	1	1	—	—	—	1	—	—	—	—	7
3. Scarlet Fever	—	—	—	—	—	—	—	—	—	1	—	—	—	1
4. Whooping Cough	1	2	1	—	—	—	—	—	—	—	—	—	—	4
5. Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Erysipelas	—	—	—	—	—	—	—	—	—	1	—	1	—	2
7. Tuberculosis of Respiratory System	5	13	11	6	3	37	67	122	132	137	102	48	9	692
8. Tubercular Meningitis ...	2	8	9	8	4	2	—	2	—	2	—	—	—	37
9. Abdominal Tuberculosis ...	1	1	—	—	1	1	1	3	3	1	2	—	—	14
10. Other Tuberculous Disease	1	1	2	1	2	3	2	1	2	2	1	1	—	19
11. Syphilitic Disease ...	2	—	—	—	1	—	—	1	2	10	10	9	3	38
12. Influenza	3	1	—	—	—	—	—	—	—	3	7	6	5	25
13. Measles	1	5	3	1	—	—	—	—	—	—	—	—	—	10
14. Acute Poliomyelitis and Polioencephalitis ...	—	—	2	—	—	1	—	—	—	—	—	—	—	3
15. Acute Infectious Encephalitis	—	—	—	—	—	—	—	—	4	—	3	2	1	10
16. Cancer—all forms ...	—	—	—	—	—	1	3	15	67	169	289	367	190	1,101
17. Diabetes	—	—	—	—	3	—	1	—	2	1	5	16	8	36
18. Intra-cranial Vascular Lesions	1	—	—	2	—	1	1	3	13	31	116	245	184	597
19. Other Nervous Diseases ...	35	3	1	4	2	2	4	14	18	16	18	14	8	139
20. Heart Disease	—	—	—	3	5	9	8	20	58	199	374	596	544	1,816
21. Other Diseases of Circulatory System	1	—	—	—	—	—	—	—	4	10	22	47	89	173
22. Bronchitis	3	—	1	1	—	—	1	4	11	26	43	40	32	162
23. Pneumonia	82	9	3	2	2	—	2	5	14	32	59	57	40	307
24. Other Respiratory Diseases	5	1	—	—	1	1	1	1	2	14	11	17	17	71
25. Ulceration of the Stomach and the Duodenum ...	—	—	—	—	—	—	1	3	18	13	28	20	4	87
26. Diarrhoea (under 2 years)	156	5	—	—	—	—	—	—	—	—	—	—	—	161
27. Appendicitis	—	—	2	3	3	1	1	3	1	2	2	3	2	23
28. Other Digestive Diseases	7	—	2	4	—	—	1	3	10	18	26	38	24	133
29. Nephritis	—	—	2	—	2	3	1	5	10	12	26	27	30	118
30. Puerperal and Post-abortive Sepsis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31. Other Maternal Causes ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32. Premature Birth	223	—	—	—	—	—	—	—	—	—	—	—	—	223
33. Congenital Malformations, Birth Injury, Infantile Diseases	164	4	1	1	1	1	—	—	—	1	—	—	—	173
34. Suicide, Road Traffic Accidents and other Violent Causes	17	4	17	24	12	7	17	28	44	38	51	46	40	345
35. All other Causes	20	2	3	8	5	7	1	12	24	73	121	204	219	699
All Causes	733	60	60	69	48	77	113	245	440	812	1,316	1,804	1,449	7,226

DIFFERENT CAUSES IN SEXES AND AT SEVERAL AGE-PERIODS.

CAUSE OF DEATH.	FEMALES.													Total Females.	Total Both Sexes.
	−1	−2	−5	−10	−15	−20	−25	−35	−45	−55	−65	−75	75+		
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Cerebro-spinal Fever ...	2	2	2	1	—	—	—	1	—	—	—	—		8	15
3. Scarlet Fever	—	1	—	—	—	—	—	—	—	—	1	—	—	2	3
4. Whooping Cough	2	—	—	1	—	—	—	—	—	—	—	—	—	3	7
5. Diphtheria	—	3	3	2	—	—	—	—	—	—	—	—	—	8	8
6. Erysipelas	—	—	—	—	—	—	—	—	—	1	—	2	—	3	5
7. Tuberculosis of Respiratory System	6	6	6	4	11	82	140	180	87	24	15	12	2	575	1267
8. Tubercular Meningitis ...	4	10	8	5	6	3	1	2	1	—	—	—	—	40	77
9. Abdominal Tuberculosis ...	—	—	3	—	3	3	2	2	2	1	2	—	—	18	32
10. Other Tuberculous Disease	—	1	2	3	2	5	4	1	1	—	2	—	1	22	41
11. Syphilitic Disease ...	—	—	—	—	—	—	—	2	—	1	3	1	—	7	45
12. Influenza	—	—	—	—	—	—	—	—	1	—	1	2	8	12	37
13. Measles	7	3	2	1	—	—	—	—	—	—	—	—	—	13	23
14. Acute Poliomyelitis and Polioencephalitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
15. Acute Infectious Encephalitis	—	—	—	—	—	—	—	3	3	3	2	4	—	15	25
16. Cancer—all forms ...	1	—	1	1	1	—	—	13	71	164	232	293	206	983	2084
17. Diabetes	—	—	—	—	—	—	—	2	—	7	39	51	12	111	147
18. Intra-cranial Vascular Lesions	—	—	—	—	—	1	—	4	8	58	113	291	316	791	1388
19. Other Nervous Diseases ...	14	4	4	4	2	4	3	7	16	15	11	15	9	108	247
20. Heart Disease	1	—	—	3	12	8	6	19	68	100	261	504	691	1673	3489
21. Other Diseases of Circulatory System	—	—	—	—	—	—	—	3	2	14	17	47	57	140	313
22. Bronchitis	5	—	1	—	—	1	—	1	3	4	14	15	39	83	245
23. Pneumonia	58	10	3	3	2	1	—	4	7	11	22	21	44	186	493
24. Other Respiratory Diseases	5	1	—	1	—	1	1	2	4	6	7	13	28	69	140
25. Ulceration of the Stomach and the Duodenum ...	—	—	—	—	—	—	—	1	4	1	3	7	3	19	106
26. Diarrhoea (under 2 years)	86	3	—	—	—	—	—	—	—	—	—	—	—	89	250
27. Appendicitis	—	—	1	—	1	3	1	—	1	—	1	2	2	12	35
28. Other Digestive Diseases	8	—	2	1	—	1	1	4	8	26	29	48	26	154	287
29. Nephritis	—	—	—	—	1	5	3	8	7	15	26	26	19	104	222
30. Puerperal and Post-abortive Sepsis	—	—	—	—	—	—	1	5	3	—	—	—	—	9	9
31. Other Maternal Causes ...	—	—	—	—	—	—	2	17	8	—	—	—	—	27	27
32. Premature Birth	146	—	—	—	—	—	—	—	—	—	—	—	—	146	369
33. Congenital Malformations, Birth Injury, Infantile Diseases	134	2	2	2	1	1	—	1	1	—	2	1	—	147	320
34. Suicide, Road Traffic Accidents and other Violent Causes	19	1	4	6	4	7	3	7	9	21	23	37	58	199	544
35. All other Causes	10	3	5	4	10	9	—	11	31	53	105	144	233	618	1317
ALL CAUSES	508	50	49	42	56	135	168	300	346	525	925	1536	1754	6394	13620

TABLE XI.—Glasgow.—DEATHS under 1 Year and Death-rates per 1,000 Births in each Municipal Ward, for the Year 1948.

Municipal Wards.	Deaths —1 Year.	Death Rate per 1,000 Births.		
	1948.	1948.	1947.	1946.
1. Shettleston and Tollcross	46	52	77	73
2. Parkhead	21	54	84	72
3. Dalmarnock	68	63	90	74
4. Calton	36	53	111	82
5. Mile-end	62	61	99*	67*
6. Dennistoun	23	47	62	69
7. Provan	24	64	98	73
8. Cowlairs	42	60	72	40
9. Springburn	30	66	106	73
10. Townhead	47	54	92	72
11. Exchange	23	50	99*	85*
12. Anderston	46	57	72*	60*
13. Park	21	53	73*	61*
14. Cowcaddens	51	70	85	75
15. Woodlands	39	55	67	65
16. Ruchill	45	51	66	55
17. North Kelvin	30	56	86	55
18. Maryhill	34	59	71	54
19. Kelvinside	8	28	62	25
20. Partick (East)	15	36	77	112
21. ,, (West)	38	63	80	60
22. Whiteinch	24	52	59	40
23. Yoker	19	40	55	69
24. Knightswood	21	73		
25. Hutchesontown	35	44	69	75
26. Gorbals	76	70	103	87
27. Kingston	60	83	97	92
28. Kinning Park	38	51	75	70
29. Govan	66	71	86	94
30. Fairfield	20	42	67	57
31. Craigton	24	39	47	47
32. Pollokshields	13	40		
33. Camphill	11	31	35	26
34. Pollokshaws	33	69	59	61
35. Govanhill	24	50	51	50
36. Langside	7	19	34	60
37. Cathcart	6	20	33	42
Institutions	15	—	—	—
Harbour	—	—	—	—
City	1,241	56	77	67

Owing to redivision of wards comparison with previous years is only approximate. * Rates recalculated on 1948 basis.

TABLE XII.—GLASGOW 1948—INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSE OF DEATH.	MALES.						FEMALES.						Total — 1 year. Both Sexes.
	Age in Months.						Age in Months.						
	— 1	— 3	— 6	— 9	— 12	Total.	— 1	— 3	— 6	— 9	— 12	Total.	
I. CONGENITAL MALFORMATIONS	32	18	5	4	1	60	37	11	4	4	3	59	119
II. DISEASES OF EARLY INFANCY—													
(a) Congenital Debility, Sclerema, and Icterus	9	1	2	1	—	13	12	2	—	—	—	14	27
(b) Premature Birth	216	5	2	—	—	223	139	6	1	—	—	146	369
(c) Injury at Birth	32	2	—	—	2	36	17	2	1	—	—	20	56
(d) Atelectasis	30	1	1	—	—	32	22	2	—	2	—	26	58
(e) Others	16	4	3	—	—	23	14	—	1	—	—	15	38
III. DISEASES OF RESPIRATORY SYSTEM ...	17	32	27	10	4	90	8	21	21	11	7	68	158
IV. DISEASES OF DIGESTIVE SYSTEM—													
(a) Diarrhoeal	16	61	48	20	11	156	13	26	26	15	6	86	242
(b) Others	—	2	2	2	1	7	1	3	2	2	—	8	15
V. DISEASES OF NERVOUS SYSTEM ...	6	15	8	5	2	36	3	5	4	2	—	14	50
VI. TUBERCULOUS DISEASES—													
(a) Pulmonary Tuberculosis	—	—	1	3	1	5	—	1	2	2	1	6	11
(b) Tuberculous Meningitis	—	—	—	1	1	2	—	—	1	3	—	4	6
(c) Abdominal Tuberculosis	—	—	—	—	1	1	—	—	—	—	—	—	1
(d) Other Forms	—	1	—	—	—	1	—	—	—	—	—	—	1
VII. INFECTIOUS DISEASES—													
(a) Measles	—	—	1	—	—	1	—	—	3	1	3	7	8
(b) Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—
(c) Whooping Cough	—	—	1	—	—	1	—	1	1	—	—	2	3
(d) Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—
(e) Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—
(f) Cerebro-spinal Fever	—	—	—	3	—	3	—	—	—	2	—	2	5
(g) Varicella	—	—	—	—	—	—	—	—	—	—	—	—	—
(h) Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—
VIII. SYPHILIS	—	2	—	—	—	2	—	—	—	—	—	—	2
IX. OVERLAYING	3	2	1	—	1	7	2	5	1	—	—	8	15
X. OTHER VIOLENCE	1	1	6	1	1	10	1	4	6	—	—	11	21
XI. ALL OTHER CAUSES	4	7	5	7	1	24	3	3	3	2	1	12	36
TOTALS	382	154	113	57	27	733	272	92	77	46	21	508	1,241

TABLE XIII.—Glasgow, 1946-1948.—Abstract of Notifications under Notification of Births Act, 1907, and Results of Visits.

	1948	1947	1946
Total Number of Notifications	23,108	26,794	24,780
Doctor at Home	3,533	4,078	3,434
Doctor in Nursing Home	2,224	2,747	2,609
Doctor in Institution	10,331	10,206	10,100
Maternity Hospital (Outdoor) Nurse ...	2,080	2,790	2,639
Midwife in Nursing Home	535	477	419
Certified Midwife	1,112	2,277	2,423
Municipal Midwife	3,290	4,210	3,145
Others	3	9	11
Total Cards issued	18,474	21,196	19,713
Total Cards returned	18,695	21,413	19,319
Full Information	18,373	21,055	18,947
Doctor found in Attendance	—	—	—
Others	322	358	372

TABLE XIV.—Glasgow, 1946-1948.—Births Notified showing Medically and not Medically Attended.

	1948	1947	1946
Notifications Received—*less Duplicates*—			
Total	23,108	26,794	24,780
Live-births	22,368	25,954	23,894
Still-births	740	840	886
Per cent. Still-births to Total	3·2	3·1	3·6
Medically attended—			
Births at Home	3,533	4,078	3,434
Births in Nursing Home	2,224	2,747	2,609
In Institutions	10,331	10,206	10,100
Total	16,088	17,031	16,143
Per cent.	69·6	63·6	65·1
Still-births at Home	96	87	108
Still-births in Nursing Home	44	55	66
Still-births in Institutions	489	532	541
Not Medically attended—			
Maternity Hospital, Outdoor Nurse ...	2,080	2,790	2,639
Certified Midwives in Nursing Home ...	535	477	419
Certified Midwives in Private Practice	1,112	2,277	2,423
Municipal Midwives	3,290	4,210	3,145
Others	3	9	11
Total	7,020	9,763	8,637
Per cent.	30	36	35
Still-births	111	166	171

TABLE XV.—GLASGOW, 1948 and 1947.—CASES OF INFECTIOUS DISEASE REGISTERED AND NUMBERS OF THESE TREATED IN FEVER HOSPITALS, &c.

	1948				1947			
	Fever Hosp.	Other Institutions	Home	Total	Fever Hosp.	Other Institutions	Home	Total
A.—Notifiable—								
Typhus Fever	—	—	—	—	—	—	—	—
Enteric Fever	11	—	1	12	18	—	—	18
Paratyphoid B	2	—	1	3	18	—	—	18
Continued and Undefined Fever	5	—	2	7	2	1	2	5
Puerperal Fever ...	230	20	—	250	303	7	—	310
Puerperal Pyrexia ...	64	49	9	122	79	50	14	143
Smallpox	—	—	—	—	—	—	—	—
Scarlet Fever	2,573	3	1,332	3,908	2,100	—	1,467	3,567
Diphtheria and Membranous Croup	286	—	—	286	499	—	3	502
Erysipelas	232	4	244	480	214	5	254	473
Cholera	—	—	—	—	—	—	—	—
Cerebro-spinal Fever ...	86	6	5	97	124	4	4	132
Ophthalmia Neonatorum	32	—	231	263	44	—	261	305
Trachoma	—	1	3	4	—	—	1	1
Acute Encephalitis Lethargica	1	2	3	6	—	1	3	4
Acute Polio-Encephalitis	1	—	—	1	17	1	1	19
Acute Poliomyelitis ...	6	—	—	6	272	6	19	297
Acute Primary Pneumonia	2,208	1,350	1,165	4,723	2,491	1,426	1,479	5,396
Acute Influenzal-Pneumonia	8	6	21	35	25	21	42	88
Malaria	14	4	10	28	17	1	14	32
Dysentery	847	18	313	1,178	203	1	73	277
Infective Jaundice ...	1	1	—	2	2	1	1	4
Anthrax	—	—	—	—	1	—	—	1
Pulmonary Tuberculosis	933	—	1,842	2,775	885	—	1,880	2,765
Other Forms of Tuberculosis	141	—	232	373	142	—	370	512
B.—Not Notifiable								
Measles	693	8	7,431	8,132	436	1	3,793	4,230
German Measles ...	14	—	205	219	63	1	1,062	1,126
Whooping-cough ...	138	1	1,564	1,703	372	6	5,078	5,456
Chickenpox	218	—	6,658	6,876	152	—	5,401	5,553
Mumps	35	—	6	41	68	—	12	80
Pemphigus Neonatorum	15	—	4	19	17	—	24	41
Leprosy	—	—	—	—	—	—	—	—
Totals	8,794	1,473	21,282	31,549	8,564	1,533	21,258	31,355
Notified, but diagnosis altered to Non-Infectious Diseases ...	3,005	1	17	3,023	3,152	—	2	3,154
Total Registered ...	11,799	1,474	21,299	34,572	11,716	1,533	21,260	34,509

Where patients suffer from two or more diseases, each disease is reckoned as a case.

Apart from cases of pneumonia admitted to Corporation General Hospitals and Voluntary Institutions in times of pressure; cases of puerperal fever, puerperal pyrexia, and ophthalmia neonatorum occurring in other than Fever Hospitals and allowed to remain; and cases of trachoma treated in Stobhill Hospital; the cases shown under the headings "Corporation General Hospitals" and "Other Institutions" are, for the most part, accidental.

TABLE XVI.—CASES OF INFECTIOUS DISEASE REGISTERED IN EACH MONTH IN 1948.

	MONTH.												YEAR.	
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Hosp.	Home
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric, including Paratyphoid Fever ...	1	—	1	—	—	3	1	3	2	3	—	1	13	2
Continued and Undefined Fever	—	—	—	1	1	—	—	—	1	—	1	3	5	2
Puerperal Fever	16	20	28	21	24	27	23	21	28	21	9	12	250	—
Puerperal Pyrexia	7	13	18	10	10	8	7	8	8	14	4	15	113	9
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	493	406	393	339	366	311	225	147	212	341	369	306	2,576	1,332
Diphtheria and Membranous Croup	30	25	34	26	21	26	17	11	32	27	24	13	286	—
Erysipelas	51	61	52	34	23	42	34	31	27	27	49	49	236	244
Cerebro-spinal Fever	9	10	13	6	6	7	4	7	8	6	8	13	92	5
Ophthalmia Neonatorum	33	25	16	18	17	25	24	22	22	25	13	23	32	231
Trachoma	—	—	—	1	—	1	—	—	—	—	—	2	1	3
Acute and Chronic Encephalitis Lethargica...	1	—	—	2	1	1	—	1	—	—	—	—	3	3
Acute Polioencephalitis	—	—	—	—	—	—	—	—	—	—	—	1	1	—
Acute Poliomyelitis	—	—	—	—	—	—	1	—	1	2	2	—	6	—
Acute Primary Pneumonia	487	468	565	354	338	288	189	159	201	294	483	897	3,558	1,165
Acute Influenzal Pneumonia	7	4	5	2	1	—	2	1	1	2	3	7	14	21
Malaria	5	2	3	—	2	2	1	5	2	3	2	1	18	10
Dysentery	32	37	41	59	130	86	108	128	144	177	121	115	865	313
Pulmonary Tuberculosis	201	240	262	277	245	286	220	218	166	237	237	186	933	1,842
Tuberculosis	37	39	43	38	37	36	29	24	24	30	19	17	141	232
Measles	3,592	2,279	1,216	570	222	93	8	6	22	23	58	43	701	7,431
German Measles	24	23	35	28	26	15	2	1	10	24	18	13	14	205
Whooping Cough	50	56	60	65	62	71	12	62	259	218	346	442	139	1,564
Chickenpox	1,059	1,200	1,206	1,114	860	727	24	38	122	164	153	209	218	6,658
Total	6,135	4,908	3,991	2,965	2,392	2,055	931	893	1,292	1,638	1,919	2,368	31,487	
Hospital	1,121	1,052	1,147	896	844	744	573	523	619	832	896	968	10,215	—
Home	5,014	3,856	2,844	2,069	1,548	1,341	358	370	673	806	1,023	1,100		21,272
Add Others *													52	10
Altered Diagnosis													3,006	17
													13,273	21,299

* Mumps, 41; Pemphigus Neonatorum, 19; Infective Jaundice, 2.

TABLE XVII.

OPERATIONS OF SANITARY SECTION.

1. (*a*) **Nuisances.**	Central	Northern	Eastern	South-Eastern	South-Western	City 1948	1947
INSPECTIONS made—							
Nuisances	99,827	155,869	113,020	53,054	154,439	576,209	553,485
Bug Disinfestation	1,369	556	1,132	767	190	4,014	4,004
Water Storage Cisterns ...	1,122	987	1,229	479	32	3,849	3,260
Limewashings	6,754	11,818	5,362	4,027	5,127	33,088	30,469
Stair Cleaning	2,931	5,556	4,368	4,185	8,305	25,345	25,420
Drain Testing	3,074	3,218	2,893	1,141	4,556	14,882	15,783
Rats and Mice Destruction Acts	7,591	7,207	8,382	15,922	1,041	40,143	37,164
Total	122,668	185,211	136,386	79,575	173,690	697,530	669,585
Nuisances removed or remedied Consisting of—	7,645	17,393	11,610	7,835	14,460	58,943	62,119
Apartments, Lobbies, or W.C.'s, with insufficient light or ventilation, or otherwise defective in construction	—	3	—	2	4	9	4
Defective Chimneys causing nuisance	128	143	98	113	124	606	519
Disrepair or dampness in Dwelling-houses	1,191	2,519	1,826	1,714	1,840	9,090	9,450
Offensive smells from Drains, or other reasonable grounds—smoke test	3	—	1	3	—	7	6
Drains, Conductors, Soil-pipes, or Rones choked or defective ...	3,534	6,777	4,351	3,614	6,709	24,985	28,200
Sanitary Fittings choked or defective	449	1,100	725	774	920	3,968	4,350
Dirty Houses and Bedding and Children	9	101	1,254	59	28	1,451	1,372
Dirty Closes, Stairs, etc. (daily and bi-weekly cleaning) ...	58	1,147	216	89	164	1,674	1,291
Houses overcrowded	—	984	816	—	675	2,475	2,343
Common passages, stairs or staircases not in a cleanly state (limewashing or painting) ...	1,265	1,642	972	488	1,097	5,464	4,849
Animals or Poultry kept so as to be a nuisance	—	3	3	1	7	14	14
Accumulation of Garbage or Rubbish	149	166	54	62	93	524	512
Smells from Decaying Animal Matter or other cause ...	5	4	3	8	9	29	4
Stagnant Water	18	4	6	18	37	83	98
Premises infested with Rats or other vermin	43	568	506	251	65	1,433	790
Sink accommodation and Water Supply required	—	—	—	—	—	—	—
Water-Closet accommodation required ...	1	13	—	2	—	16	7
Water Storage Cisterns dirty, uncovered, or unventilated ...	201	575	96	8	34	914	1,026
Water Supply Pipes defective—tenants without water ...	35	120	23	50	227	455	951

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City	
						1948	1947
Pit Shaft without adequate protection	—	—	—	—	—	—	—
Reports to Gas Manager ...	—	3	—	5	1	9	9
,, Master of Works ...	296	853	359	301	1,214	3,023	3 196
,, Superintendent of Cleansing	22	44	3	4	491	564	126
,, Water Engineer ...	238	624	298	269	721	2 150	2,962
Prosecutions—Sheriff Court ...	2	1	1	4	1	9	3
,, Police Court ...	4	17	7	32	9	69	10
Number Successful	5	18	8	30	9	70	13
Amount of Fines	£2 5 0	£10 15 0	£4 10 0	£3 0 0	£17 10 8	£38 0 8	£4 5 0
Number of Rotation Cards for Cleansing of Common Stairs, Lobbies, and W.C.'s served on Tenants	988	7,030	858	1,481	1,651	12,008	9.135
1. (*b*) Drain Testing.							
Number of Applications for satisfaction of Dean or Guild Court	172	804	302	495	1,001	2,774	2,694
Number of first Applications to old Tenements or Systems ...	8	—	6	6	2	22	28
Number of these found more or less defective	—	—	7	6	—	13	11
Subsequent applications to old Tenements or Systems ...	1	2	1	5	5	14	16
2. Common Lodging Houses							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	7	5	7	1	3	23	24
With accommodation for ...	1,815	1,579	2,413	382	943	7,132	7,145
Number of inspections by day	133	120	302	15	170	740	892
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	13	43	7	2	18	83	42
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fine	—	—	—	—	—	—	—
3. Boarding Houses for Emigrants and Seamen.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	3	—	1	—	—	4	6
With accommodation for ...	364	—	131½	—	—	495½	615½
Number of inspections by day	—	—	61	—	—	61	45
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1948	City 1947
4. Houses-Let-in-Lodgings.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	86	—	—	1	28	115	198
Number of inspections by day	52	2	8	—	59	121	409
Number of inspections by night	—	20	—	—	—	20	—
Number of irregularities ...	15	—	—	—	3	18	31
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fines	—	—	—	—	—	—	—
5. Farmed-out Houses.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	102	—	98	—	—	200	212
Number of inspections by day	178	—	698	—	—	876	553
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	21	—	57	—	—	78	78
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fine	—	—	—	—	—	—	—
6. Ticketed Houses.							
Number ticketed for first time	—	—	—	—	—	—	—
Total number now on register ...	1,134	1,619	1,500	—	534	4,787	4,947
Number of visits by day ...	—	—	—	—	—	—	—
Number of inspections by night	—	—	—	—	—	—	—
Number of cases of Over-crowding found and warned ...	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—
7. Tents and Vans.							
Number of inspections	4	349	365	7	21	746	376
Number of irregularities ...	—	—	2	—	2	4	7
Number of prosecutions	—	—	—	—	—	—	—
8. Mech. Bakehouses.							
Number measured and registered	4	—	1	2	—	7	6
Total number now on register ...	69	58	56	58	30	271	263
Number of inspections	242	156	344	134	126	1,002	845
Number dirty	18	12	25	21	14	90	89
Number Overcrowded	—	—	—	—	—	—	—
Number defective in light or ventilation	1	1	1	3	—	6	22
Number with sanitary convenience required	—	—	2	—	1	3	1
Number with sanitary fittings choked or defective	2	1	4	1	7	15	7
Number of other nuisances ...	6	7	15	5	2	35	38
Number of prosecutions	—	—	—	—	—	—	—

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

9. Non-Mech. Bakehouses.	Central	Northern	Eastern	South-Eastern	South-Western	City 1948	City 1947
Number measured and registered	—	—	3	3	—	6	9
Total number now on register ...	31	51	23	27	20	152	172
Number of inspections	85	71	241	97	96	590	536
Number dirty	3	3	16	9	1	32	3
Number overcrowded	—	—	—	—	—	—	—
Number defective in light or ventilation	—	—	2	—	—	2	1
Number with sanitary conveniences required	—	—	—	—	—	—	1
Number with sanitary fittings choked or defective	—	—	—	—	—	—	1
Number of other nuisances ...	1	1	5	1	—	8	13
Number of prosecutions	—	—	—	—	—	—	—

10. Mech. Factories.	Central	Northern	Eastern	South-Eastern	South-Western	City 1948	City 1947
Number registered	137	53	35	32	49	306	252
Total number now on register ...	1,626	797	756	584	585	4,348	4,105
Number of inspections	3,523	1,576	2,739	1,018	1,155	10,011	9,457
Number with sanitary conveniences dirty	62	77	126	26	94	385	351
Number defective in light or ventilation	120	27	53	31	73	304	243
Number with sanitary conveniences required	13	3	8	5	15	44	66
Number with sanitary fittings choked or defective	21	95	52	13	182	363	201
Number of other nuisances ...	81	80	80	12	101	354	28
Number of prosecutions	—	—	—	—	—	—	1
Amount of Fine	—	—	—	—	—	—	£2 2
Other parts of factory— Number of other nuisances ...	47	27	140	14	16	244	124

11. Non-Mech. Factories.	Central	Northern	Eastern	South-Eastern	South-Western	City 1948	City 1947
Number measured and registered	—	26	11	19	5	61	55
Total number now on register ...	349	327	135	324	131	1,266	1,605
Number of inspections	2,293	566	489	710	364	4.422	4,53
Number dirty	69	12	10	21	14	126	13
Number overcrowded	—	—	—	—	—	—	—
Number defective in light of ventilation	38	5	—	13	2	58	4
Number with sanitary conveniences required	4	—	1	3	3	11	1
Number with sanitary fittings choked or defective	2	9	5	3	6	25	2
Number of other nuisances ...	47	7	15	6	2	77	6
Number of prosecutions	—	—	—	—	—	—	—

TABLE XVII.—*Continued*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City	
						1948	1947
12. Shops.							
Number of inspections	1,536	9	1,273	2	284	3,104	2,193
Number dirty	1	—	3	1	5	10	13
Number defective in ventilation, temperature or lighting ...	1	1	—	—	4	6	8
Number with sanitary conveniences required	1	—	—	1	9	11	7
Number with washing facilities required	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective	4	4	1	7	3	19	20
Number of other nuisances ...	24	85	99	119	19	346	279
13. Fish Restaurants.							
Number of inspections	—	109	2	9	—	120	16
Number dirty	3	3	—	—	—	6	—
Number defective in light or ventilation	—	—	—	—	—	—	—
Number requiring sanitary conveniences	—	—	—	—	—	—	—
Number with sanitary fittings choked, etc.	—	—	—	—	—	—	—
Number of other nuisances ...	—	3	2	1	—	6	15
14. Offices.							
Number of inspections	82	94	10	—	2	188	161
Number dirty	6	—	—	—	—	6	1
Number defective in light or ventilation	—	—	—	—	—	—	1
Number with sanitary conveniences required	—	—	—	—	—	—	1
Number with washing facilities required	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective	3	—	—	—	—	3	1
Number of other nuisances ...	11	—	1	—	—	12	8
15. Homeworkers' Dwellings.							
Total number now on register ...	28	27	26	20	15	116	68
Number of inspections	34	28	31	23	24	140	61
Number found dirty	—	—	—	—	—	—	—
16. Bothies, Chaumers.							
Number of inspections ...	—	—	—	60	15	75	6
Number dirty	—	—	—	—	—	—	—
Number of other nuisances ...	—	—	—	—	—	—	—

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1948	City 1947
17. Piggeries.							
Total number now on register ...	5	32	6	7	2	52	55
Number of inspections	48	129	66	17	22	282	201
Number found dirty	—	15	3	1	—	19	13
Number of other nuisances ...	—	6	6	—	—	12	3
Number of prosecutions	—	—	—	—	—	—	—
18. Offensive Trades.							
Total number now on register ...	4	7	39	—	2	52	52
Number of inspections	—	30	347	—	3	380	401
Number of irregularities ...	—	5	44	—	—	49	15
Number of prosecutions	—	—	—	—	—	—	—
19. Rag Flock Act, 1911.							
Total number of visits	—	—	—	—	—	—	8
Samples submitted for analysis	—	—	—	—	—	—	4
Certified not to conform to standard	—	—	—	—	—	—	1
Number of prosecutions	—	—	—	—	—	—	—
Number of convictions	—	—	—	—	—	—	—
Amount of fines	—	—	—	—	—	—	—
20. Broker's Premises.							
Total number of visits	12	27	—	16	3	58	74
Number dirty	1	3	—	—	—	4	1
Number of other nuisances ...	—	—	3	—	—	3	4
21. Cemeteries.							
Total number of visits	—	1	—	4	1	6	8
22. Air Raid Shelters.							
Number of inspections	14	47	—	5	83	149	—
Number dirty	—	—	—	—	—	—	2
Number defective in light or ventilation	—	—	—	—	—	—	—
Number with sanitary conveniences choked, etc.	—	—	—	—	—	—	—
Number of other nuisances ...	4	2	—	—	1	7	20

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City	
						1948	1947
23. Infectious Diseases, etc.							
Infectious Diseases, visits ...	13,527	21,084	12,756	12,476	13,084	72,927	70,788
Pre-admissions, Country Homes, visits	—	—	—	—	—	—	—
Vaccination visits	317	587	374	432	372	2,082	4,575
Institutional census	27	2	—	4	—	33	46
Air Raid Precautions visits ...	—	—	—	—	—	—	—
24. Housing Acts.							
Total number of visits	7,099	6,774	5,009	1,704	3,479	24,065	15,171
25. Squatter's Premises.							
Total number of visits	123	38	71	89	479	800	899
26. Work of Female Inspectors.							
Under the Glasgow Corporation (Police) Order, 1904—							
(*a*) **Verminous Children.**							
Number of visits to schools ..	204	464	409	105	92	1,274	1,319
Number of children submitted for inspection	15,587	32,332	30,032	8,549	9,643	96,143	91,721
Number of children found infested	4	15	267	152	1	439	491
Number of children found infected	3,617	4,772	6,863	1,883	1,735	18,870	17,593
Number of children found with fleas	4	17	88	16	—	125	246
Number of children found dirty	1	26	423	45	261	756	944
Number of written notices ...	—	17	285	162	3	467	519
Number of children cleaned by Guardians	1,384	3,772	3,561	1,638	1,070	11,425	11,608
Number of children cleaned by officers	1	7	273	7	—	288	324
Number of special visits ...	71	8	115	4	—	198	—
Number of children examined	—	—	—	—	—	—	—
Number of children re-inspected	9,708	16,299	17,375	3,927	4,430	51,739	50,241
Number of infectious diseases	12	20	74	1	4	111	199

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City	
						1948	1947
(*b*) Homes of Verminous Children.							
Number of houses inspected ...	371	1,971	4,842	344	536	8,064	7,084
Number of houses in which lodgers were found	11	7	3	—	—	21	11
Number of houses found dirty	1	—	—	—	—	1	5
Number of houses with dirty bedding	1	1	—	—	—	2	5
Number of written notices ...	—	1	—	—	—	1	9
Number of re-inspections ...	1	—	160	—	—	161	271
Number of houses cleaned ...	1	—	10	—	—	11	17
Number of bedding cleaned ...	—	—	8	—	—	8	3
(*c*) House-to-House Visitation.							
Number of houses visited first time	651	1,552	76	443	86	2,808	3.544
Number of houses in which lodgers were found	24	—	—	—	—	24	26
Number of houses found dirty	2	—	6	1	—	9	46
Number of houses with dirty bedding	4	3	5	—	—	12	12
Number of houses—Written notices...	—	—	16	—	—	16	24
Number of houses—Re-visits...	52	102	19	6	4	183	116
Number of houses found cleaned	19	12	11	1	1	44	47
Number of houses—Bedding found cleaned	3	7	4	—	—	14	19
(*d*) Re-housing Scheme Visitation.							
Number of houses visited first time	2,865	27,326	26,479	4,930	4.487	66,087	66,162
Number of houses in which lodgers were found	610	2,355	3,794	—	—	6,759	6,065
Number of houses found clean	2,619	18,194	13,711	4,253	3,890	42.667	42,777
Number of houses found fair	246	9,090	11,766	644	593	22,339	22,368
Number of houses found unsatisfactory	—	—	—	—	—	—	—
Number of houses found dirty	—	42	1,002	33	4	1,081	1.017
Number of houses with dirty bedding	8	12	293	2	—	315	234
Number of written notices ...	—	2	1,127	4	—	1.133	1,087
Number of re-visits	—	565	1,361	288	9	2,223	2,224
Number of houses found cleaned	—	32	945	40	4	1,021	1,082
Number of bedding found cleaned	—	5	267	3	—	275	242

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City	
						1948	1947
(*e*) **Intermediate Housing Scheme Visitation.**							
Number of houses visited ...	679	620	59	140	—	1,498	1,564
Number of houses in which lodgers were found	148	4	14	—	—	166	72
Number of houses found clean	530	538	20	111	—	1,199	1,277
Number of houses found fair...	146	78	25	20	—	269	264
Number of houses found unsatisfactory	—	—	—	—	—	—	—
Number of houses dirty ...	3	4	14	9	—	30	22
Number of houses with dirty bedding	1	1	4	2	—	8	5
Number of written notices ...	—	—	17	—	—	17	10
Number of re-visits	11	22	24	29	—	86	64
Number of houses found cleaned	4	2	23	5	—	34	23
Number of bedding found cleaned	1	8	7	—	—	16	6
Number of empty houses visited	2	46	99	—	—	147	133
(*f*) **Other Work.**							
Number of nuisances reported by Female Inspectors ...	9	8	13	—	—	30	44
Number of infectious disease cases reported by Female Inspectors	3	—	—	—	—	3	1

TABLE XVIII.—GLASGOW.—POPULATION; BIRTHS AND DEATHS; BIRTH-RATES AND DEATH-RATES PER 1,000; ALSO DEATHS UNDER 1 YEAR, AND DEATH-RATES PER 1,000 BIRTHS SINCE 1871.

Year	Population	Births	Deaths	Birth-rate per 1,000	Death-rate per 1,000	Deaths under 1 Year	
						Number	Rate per 1,000 Births
1871 ...	491,900	18,867	15,790	38·4	32·1	3,608	191
1881 ...	512,034	19,106	12,916	37·3	25·2	2,745	144
1891 ...	567,143	19,857	14,324	35·0	25·3	2,946	148
1901 ...	761,925	24,206	16,197	31·8	21·2	3,607	149
1902 ...	762,789	24,722	15,532	32·4	20·4	3,206	129
1903 ...	763,654	25,135	15,073	32·9	19·7	3,663	146
1904 ...	764,521	24,754	15,414	32·4	20·2	3,606	146
1905 ...	765,389	24,316	14,460	31·8	18·9	3,195	131
1906 ...	780,192*	24,560	14,889	31·5	19·1	3,223	131
1907 ...	781,080	24,006	15,659	30·7	20·0	3,116	130
1908 ...	781,969	23,915	15,265	30·6	19·5	3,284	137
1909 ...	782,860	23,140	15,242	29·6	19·5	3,073	133
1910 ...	783,785	22,222	13,395	28·4	17·1	2,694	121
1911 ...	784,680	21,755	13,899	27·7	17·7	3,016	139
1912 ...	785,600	22,044	13,797	28·1	17·6	2,740	124
1913‡...	1,021,789*	28,688	17,693	28·1	17·3	3,706	129
1914 ...	1,028,440	29,462	17,522	28·6	17·0	3,913	133
1915 ...	1,035,091	27,943	20,159	27·0	19·5	4,007	143
1916 ...	1,041,742	27,094	16,601	26·0	15·9	2,996	111
1917 ...	1,048,393	24,030	16,691	22·9	15·9	3,089	129
1918 ...	1,055,044	23,524	18,362	22·3	17·4	2,660	113
1919 ...	1,061,695	25,835	18,237	24·3	17·2	2,937	114
1920 ...	1,068,346	32,626	16,765	31·5	15·7	3,477	107
1921 ...	1,075,000	29,712	15,625	27·6	14·5	3,138	106
1922 ...	1,074,607	28,298	17,850	26·3	16·6	3,401	120
1923 ...	1,074,215	26,710	14,875	24·9	13·8	2,388	89
1924 ...	1,073,822	25,330	16,868	23·6	15·7	3,005	119
1925 ...	1,073,429	25,416	15,336	23·7	14·3	2,591	102
1926 ...	1,090,380*	24,541	15,731	22·7	14·6	2,548	104
1927 ...	1,089,988	23,578	15,439	21·6	14·2	2,527	107
1928 ...	1,089,595	23,649	15,701	21·7	14·4	2,525	107
1929 ...	1,089,202	22,799	17,760	20·9	16·3	2,438	107
1930 ...	1,088,810	23,322	15,455	21·4	14·2	2,355	101
1931 ...	1,088,461	22,926	15,505	21·1	14·2	2,397	105
1932 ...	1,095,263	22,732	16,071	20·8	14·7	2,542	112
1933 ...	1,103,357	21,361	14,747	19·4	13·4	2,061	96
1934 ...	1,115,590	21,822	15,234	19·6	13·7	2,140	98
1935 ...	1,119,414	22,102	15,537	19·7	13·9	2,169	98
1936 ...	1,119,600	22,273	16,406	19·9	14·7	2,429	109
1937 ...	1,119,863	22,176	16,379	19·8	14·6	2,313	104
1938 ...	1,127,825*	21,979	15,016	19·5	13·3	1,919	87
1939 ...	1,128,473	21,682	15,010	19·2	15·0	1,737	80
1940 ...	1,045,333†	20,965	17,603	19·1	16·8	1,983	95
1941 ...	1,045,333	20,365	16,301	18·5	15·6	2,267	111
1942 ...	1,045,333	20,615	14,679	18·8	14·0	1,863	90
1943 ...	1,045,333	22,363	14,824	20·3	14·2	1,825	82
1944 ...	1,050,000	22,203	14,603	20·2	13·9	2,108	95
1945 ...	1,050,000	20,294	13,941	19·3	13·3	1,379	68
1946 ...	1,075,000	23,560	14,502	21·9	13·5	1,588	67
1947 ...	1,100,000	25,829	15,266	23·5	13·9	1,989	77
1948 ...	1,110,000	22,292	13,620	20·1	12·3	1,241	56

* Extended City. ‡ Births and Deaths from 1913 are corrected for transfers.

† Civilian population only, shown for the war years